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The Cycles of Speculation

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The successful speculator requires four things:

1—A knowledge of values.

2—A knowledge of general conditions.

3—A knowledge of the machinery of speculation—and

4—Something besides.

I

Introduction

The first step in the education of the speculator should be to clear away the illusions which have grown rank through ignorance, and flourished through prejudice. We have heard, and continue to hear, a great deal of ethical talk on this subject, most of which emanates from people who are not authorities, and who have little real conception of the subject. It would be pretty safe to assume that a majority of these same instructors speculate themselves. They place an arbitrary construction on the word however, and draw a dividing line between stock or cereal operations, and other forms of speculation, although the basic principle is the same in all cases, i.e.: to buy what is cheap and re-sell at a profit. One of the most ridiculous forms which this pedantry assumes is the warning and preaching against speculation by very rich men who made their own money speculating and could not possibly have acquired it in any other way. Such ex-

pressions of opinion are born largely of an exaggerated ego.

The trouble with these critics and advisers is that they seldom approach the subject in the right way. With a full knowledge of the fact that speculation is an inherent part of human nature, and that a majority of human beings are bound to indulge in it in spite of everything, these sophists simply rail against the practice indiscriminately instead of attempting to point out what is foolish and fallacious. If we attack the practice in a general way little will be accomplished. If we say, "do not speculate," our audience will perchance give us a respectful hearing,—and go on speculating. If, however, we point out what is dangerous and unreasonable, confine ourselves to attacking the evils and explaining the delusions, some good may be done in an educational way. We may, if we show by simple logic that the education and qualifications necessary to success are too difficult to acquire, actually deter many people from speculating in certain lines at all, a thing which could not possibly be accomplished by mere blanket warnings against the practice. One of the most serious blunders in the world is the common one of under-estimating other people's intelligence. People are rea-

learn, and that they do learn is shown by the decreasing crop of lambs. It is not nearly so easy for the dishonest promoters and manipulators to market poor securities at high prices today as it was a few years ago. And in this regard it may be pointed out that the press has actually, although in many instances unconsciously, accomplished a great deal on exactly the lines suggested above. Magazines and newspapers have, in recent years, taken on an educational character. Periodicals once devoted to fiction or history now deal largely with business and social economics, and with the exposure of bad methods in high places, the ruthless uncovering of false or misleading statistics, and the simplification of questions hitherto involved; the public has been gaining rapidly in education and understanding. The fact that much space in leading periodicals is devoted to these subjects, is in itself prima facie evidence that the people can and will learn, for with all due credit to the editors and publishers, it is certain that the contents of magazines and newspapers are selected in accordance with what the public demands and likes.

No one will attempt to deny that a majority of public speculators lose. In a former volume, the present writer undertook to establish by

analysis of a large number of public accounts, the fact that 80% of the participators lost money. A number of critics commented on this statement as a body blow to speculation, asserting that the writer had shown that there was "80% against the player." These writers proceeded to compare this percentage with that existing in games of pure chance, such as roulette, faro, etc., and wound up by pointing out the tremendous drawback to the speculator through percentage against the player. It seems incredible that any sane man should fall into such laughable confusion of ideas. The percentage of players who lose in any game has nothing to do with the percentage against the player. If these critics established anything at all, it was that speculation was not gambling; for it requires only a moment's reflection to see that in any mechanical gambling game where there is any percentage, no matter how small, in favor of the game, the percentage of players who eventually lose must be 100. This being the case, the gentlemen mentioned were at considerable pains to prove that, as 100 per cent. of the players did not lose, speculation was not a gambling game in the strict sense of the word. That is to say, it could not be correctly compared with any mechanical device where the element of skill was absent.

If we consider the matter in a gambling light, the percentage against the speculator can be determined by the proportions of commissions, interest, taxes, etc., to capital invested. Taking commission alone as our basis, we will find that he who purchases a stock at $100 a share and pays one-quarter of one per cent. commission, has a percentage against him of one-quarter of one per cent. If the speculator trades on limited margins the drawback increases accordingly. If we assume that 100 shares of stock are purchased in a bucket-shop on a one point margin, without intention or ability to "re-margin" the transaction, the mechanical percentage is large (25%); if 10 points margin is deposited, the mechanical percentage is reduced to 2½%, etc. In the first instance, $25 or 25% of the $100 involved was lost when the transaction was recorded, without any change in market price. In the second instance, $25 was again lost or 2½% of the $1,000 involved.

There is no doubt that fluctuations in prices of securities, cereals and staples are frequently used as a basis for mere gambling transactions. But the most remarkable feature of the whole problem is the fact that the percentage of loss in transactions is greater than the mechanical percentage. In the work already mentioned,

the writer undertook to establish this. In 500 accounts examined, there was a loss of $1,245,000, and profits of $288,000, leaving a deficit of $957,000. The commission charges and interest amounted to only $275,000. There thus appeared a loss of $682,000 which could not be attributed to a gambling percentage. It may be added that the period considered in the computations was from July, 1901, to March, 1903, and that the price of the stock considered (U. S. Steel Common) was the same at the beginning and the end of the period.

This tends to again refute the theory of mere gambling, with a ruinous percentage against the player, for no mechanical device could by any possibility operate against the player to a greater extent than the fixed percentage in favor of the machine. A gambling machine will stick to its knitting. If, for example, we take the simplest form of gambling device—two dice thrown from a cup,—we know that certain numbers formed by adding the total spots which appear uppermost will show more frequently than others. Thus the number two can be effected in but one way, the number three in two ways, the number four in three ways, and so on up to the number seven, which can be formed by six different combinations, thus:

4 and 3
5 and 2
6 and 1
3 and 4
2 and 5
1 and 6

from which point the chances decrease until the number 12 can be formed in only one way—two sixes. This proposition applies to all forms of mechanical gambling, and is so simple in principle, and so distinct in operation that if we make a fair number of casts, say 1,000, and do not make more sevens than any other one number, we may be positive that the dice are defective, or loaded.

Therefore, if percentages hold true, we must attribute the surplus loss in speculation to mental operations. In the total results mentioned, these mental operations were so erroneous as to cause a loss greater than the percentage itself; but, on the other hand, a certain number of accounts showed profits; that is to say, the percentage was overcome, which is again an obvious impossibility in true gambling.

The conclusion is offered, therefore, that not only can poor methods and imperfect understanding result in losses far in excess of a demonstrated drawback, but that this drawback

may be overcome by other and more correct methods. It is difficult to understand why the opponents of speculation are continually harping on these points of gambling and percentage as bearing particularly on operations in stocks or commodities. If a man buys a certain security because it is cheap, or because he considers it cheap, and pays a certain commission to a broker for effecting the transaction, he is no more playing a percentage game than if he purchases a piece of real estate because it is cheap and pays the real estate broker a commission for his services.

Marginal trading is another abomination of the anti-speculative element, but here again the critics do not discriminate between use and abuse. Trading on insufficient margin is one of the greatest evils in the speculative world and when, as is frequently the case, this evil is combined with lack of knowledge as to values and conditions, the result is certain loss. But what is objected to here is the hazy view and comprehensive condemnation of all marginal speculation. The line of demarcation is usually carelessly drawn. If an individual buys 100 shares of stock for cash, has it registered in his own name and later borrows funds from his banker with these shares as collateral, he escapes impeachment as a marginal speculator; but if he

buys on margin, and borrows from his broker the unpaid balance, he is a gambler. And yet it would be hard to point out the difference in the two methods. If we wish to go a little further afield, we may reduce a very large percentage of the commercial structure to marginal trading. We may, in short, place in this category every merchant who buys goods on credit and every man who buys real estate on payments, if their object when buying is to sell at a profit.

It is highly probable that these contentions will be vigorously attacked, on the theory that more evil than good results from speculative ventures, and that therefore the whole structure should be razed on a "greatest good to the greatest number" basis; but aside from the intensely unphilosophical character of this view, it is not at all probable that any such thing can be effected unless human nature undergoes a radical change. Tear down every stock exchange in the United States tomorrow, and people will be speculating, a majority of them foolishly, in another week.. The cure lies not in paternalism, but in evolution and understanding. As has been said, more has been accomplished in recent years by the educational crusade of the press than by all the rantings and warnings of a century. We have our

periods of reckless over-indulgence, it is true, but the evil is dwindling. The South Sea bubble would deceive a much smaller number of people today than it did in the days of John Law.

It is the object of the present work to point out, so far as the abilities of the writer will permit, what essentials are required in any form of speculation, whether on margins, or masquerading in the guise of investment. As to this last distinction, it may be stated that the word "speculation" is herein taken to mean the purchase of any security or commodity because it is considered cheap, with the ultimate intention of disposing of the property so purchased at a profit. In the writer's opinion this definition is correct. Speculation contemplates a rise in price, and an accretion in principal. Investment refers to interest returns on money.

One of the most flagrant errors in speculation is an entirely mistaken idea as to the possibilities in this field. Nine men out of ten have a deep-rooted conviction that if any individual could be right in his main deductions for, say one or two years, he should make millions on a small capital. This is a great mistake, and leads to numerous minor errors which are productive of much loss in actual operations. The business of speculation never

did, and never will result in abnormal profits. Large returns are sometimes made, it is true, but this fact is also true of every other line of business. Certain individuals grow very rich in Wall Street; this again is true of every commercial branch. We hear now and then of a million dollar coup by a Morgan or a Rockefeller, and do not stop to consider the great capital behind it. If an individual makes five thousand dollars in a year's speculative ventures on a capital of twenty thousand, he is not considered a Napoleon of finance, but he has accomplished much more, in proportion to his capital, than Rockefeller would have accomplished if he had made five millions on similar operations.

In a recent conversation with a number of gentlemen who clung tenaciously to this idea of sudden riches, the writer undertook to establish his contention. Tapes were secured recording the fluctuations of sugar stock during a twenty point decline. The skeptics were given a hypothetical capital of $10,000 each, subjected to the ordinary rules of trading as to margins, etc., informed that sugar would decline twenty points before it again touched the first quotation established, and invited to "get rich quick." The result was ridiculous in the extreme. Two of the experimenters lost their

imaginary capital trying to double up and show large returns. The third took an unfair stand, by selling the maximum amount at the inception of the experiment and closing it after the 20 point decline had appeared. His operations, therefore, proved nothing. Here was a case where two traders, possessed of an absolute fore-knowledge of what was to occur, lost everything through the fault of over-speculation and the belief that abnormal returns could be made if the ultimate fate of a market could be correctly forecasted. Even if we assume that every intermediate movement were known in advance, that after a ten point decline there would be a five point advance, and that transactions were conducted to the full possibilities of both original margin and accrued profits, the result would not be the millions which dazzle the eyes and imagination of the unsophisticated. But to assume any such trading is foolish. The factor of safety would be wholly absent. No wise man will ever attempt pyramiding, and no foolish man who does, will succeed.

In order to clear the ground for discussion or study, the first thing to eliminate is this wholly unsupported and mistaken idea of sudden riches. No matter how correct the forecast of the future may be, safety disappears in

inverse ratio to the increased possibilities of abnormal returns; and with the factor of safety continually ignored, the final results are bound to be disastrous.

It will also be necessary to dispel another illusion. If the speculator imagines that he can operate successfully without preliminary hard work to fit him for the business in hand he is grossly mistaken. It is necessary to qualify in this field as well as in any other. Knowledge of monetary conditions, values, interest rates, and in fact, of all influences bearing directly or indirectly on the future of prices must be acquired and thoroughly understood. Ignorance on any one point may mean defeat. On the other hand, a study of such conditions means a liberal education, valuable in every line of business life. It may be further stated that the man who attempts to evade necessary labor and research by placing his dependence on tips or charts, or the opinions of others, cannot hope to succeed. The gambling idea must be put out of the question entirely, and means sought whereby intelligent opinions may be formed by both inductive and deductive reasoning.

In preparing this work the temptation to enter more extensively into fundamental principles has been great. It would be impossible

to do more than suggest a line of procedure in a single volume, and only the most elemental requisites are set forth. And not only do the prescribed limits of this volume forbid any exhaustive discussion, but such discussion is unnecessary. On every subject of importance we have books written by men of soberness and judgment, each a specialist in his field. A bibliography has been appended to this volume suggesting such works as are considered helpful. In this bibliography an attempt has been made to choose such books as are clear and simple, rather than those which are profound.

If the task as herein outlined, appears formidable, it may be said that it is absolutely necessary, and not so difficult as may appear. Before the student has entered far into the subject, he will find the matter interesting and will very quickly realize that the well grounded contentions and discussions of men who examine and diagnose economical questions correctly, are of more value than the combined tips, guesses and poorly based opinions of all the professional speculators and gamblers from one end of Wall Street to the other. This form of basic knowledge is just as important to the active trader as it is to the investor. If he can correctly judge of the general trend of future prices, he may operate safely with that

trend instead of floundering around helplessly in a slough of indecision, or possibly working directly against the current. If, for example, he has good solid reasons for expecting ultimately higher prices, he will not be disturbed by temporary reactions and, instead of being frightened out of his position through ignorance, he will take advantage of such reactions to make his purchases or cheapen his holdings. Knowledge, in this particular line as in all others, is the foundation of successful ventures.

II

The Cycles of Speculation

The great upward and downward swings of speculative prices, herein referred to as cycles, have invariably preceded or accompanied periods of business inflation or depression. This fact, apparently so elemental, is often disregarded by that very large class of speculators which is continually looking for artificial and unpregnant explanations of price changes. There can be no doubt as to the existence of manipulation, and, in rare cases, movements of considerable importance may be traced to this source alone; but manipulation consists, in its fullest sense, of the tactics resorted to for the purpose of liquidating shares in anticipation of a decline which the long-distance thinkers believe to be inevitable; or, per contra, for the accumulation of shares prior to a great recovery or readjustment. It is seldom employed as a positive means of enhancing or depressing values. In fact, to do either by mere manipulation would be an impossibility. Every observer of great speculative movements knows

that at the highest point of a movement, and during the first half of a decline everything appears roseate, while at the lowest prices, and during the first half of an advance, the reverse is true.

There are several contributory causes which operate to produce these false appearances. The primary cause is the curtailed perspective and imperfect logic of the public investor or speculator. The most difficult thing to drill into the mind of the unsophisticated is the fact that speculation cannot possibly be successfully based on appearances which are open and obvious. Such a process is a flat contradiction of the word itself. It is unseen future developments or, in some cases, hidden and submerged present truths which must be consulted. Yet we find a great majority of the public element who seek riches in the speculative arena, constantly harping on the large business of certain corporations, and the excellent state of general trade as a reason for purchasing shares. These factors have, in all probability, been discounted in current prices. Generally speaking, the present is of no more use than the past in forming opinions of future price changes. It is a certainty that sales of stocks could not be made in great volume to good advantage unless everything did look

rosy, for who would purchase shares at high prices if the future appeared threatening or unpropitious, and who would sell holdings in the face of encouraging and inspiriting prospects.

This brings us to the second phase of the question—the creation of false appearances, which is, in truth, the highest form of manipulation. When so-called inside selling is going on, great business is reported by railroad and producing corporations; dividends are increased, and public expressions of confidence emanate from men of high standing in the financial world. The effect of all this expressed optimism is, market-wise, of a negative character. When it is most prevalent and most decisive, prices halt or even decline. This period and action represents selling at the only time when advantageous selling is possible. In the main the truth only is told about existent conditions, possibly about the near future. Nothing else is necessary; but nevertheless the sellers are anticipating, not the events of the next week or the next month, but of a more remote period where they see probabilities in regard to which a discreet silence is maintained.

The constantly recurring cycles of prices, the alternate inflation and depression, must therefore be traced to something far more important than the grossly exaggerated potentiality of mere manipulation.

Principal Crises of the Last Century.

That crises in the financial world have occurred at more or less regular periods is a matter of history. Since the beginning of the nineteenth century ten of these readjustments have occurred. In 1812, after ten years of prosperous conditions preceding the war of that year, business fell off materially. The real panic, however, occurred in 1814. Washington was taken by the British on August 24th, 1814, and suspension of specie payments was general in the following two weeks.

In 1824, the protective tariff enactments were followed by general inflation in all lines of business. Two years later, in 1826, a general depression occurred with many failures. The depression at this period was even greater in England than in the United States, and many writers attribute the entire trouble to European business reverses, but it is probable that we had been living beyond our means and that this fact, to say the least, aggravated the disturbance.

In 1837, after six years of good times, another crisis occurred. This depression was attributed to various causes. The great New York fire of 1835, the loss of charter by the United States Bank in 1836, and the calling in of $37,500,000 of government deposits by

President Jackson, are all given due consideration. The actual panic, however, did not appear until May 10, 1837. All the banks suspended specie payments, and securities,—in fact all properties of whatever kind—fell rapidly in value. The most plausible explanation of this crisis is overspeculation in land. The other evils mentioned might easily have been rectified by the recuperative powers of a growing country, had the more serious element of wild inflation been absent.

In 1848, after a long period of prosperity, broken only by the war with Mexico, business inflation and overspeculation again brought about the logical and inevitable result. Europe also had been over-speculating again and a crisis in England soon extended to the United States. Liquidation was drastic and the depression lasted until the discovery of gold in California began to bear fruit.

In 1857, one of the most serious, as well as the most short-lived, of our crises occurred. Again speculation was extreme; December, 1856, marked the high point in securities, and prices continued to sag for some months; but it was not until August, 1857, that a panic occurred.

In 1864, came a crash in speculative prices following tremendous inflation. Between April, 1864, and April, 1865, leading stocks declined

from $50 to $100 per share. As the inflation of this period was caused largely by the high prices of commodities and greatly increased railroad earnings occasioned by the events of the Civil War, most writers on the subject do not consider it in their theoretical discussions of crises.

In 1872, another boom was on, particularly in Iron and Steel. The Chicago and Boston fires had not been as effective in breaking stock prices as might have been expected. Prices of stocks began going down materially in April, 1873, and in fact had been rather "toppy" during the preceding years. This panic, like most of the others, was preceded by enormous speculation and high prices. It is interesting to note that while stocks were declining, general business was booming. The trained minds of Wall Street were learning to discount the future at longer range and more accurately. The iron and steel business exceeded all former records in 1873, both in the matter of normal price and actual production.

In January, 1884, numerous failures and suspensions produced a panic which was in reality the culmination of a long decline. As in 1872, this panic was preceded by enormous general business. The steel and iron trade again broke all records in 1882, and other lines were equally prosperous.

In 1893, the period of prosperity which followed the enactment of the McKinley bill was rudely broken. Speculation had been rampant, as usual. On May 4th, 1893, the National Cordage Company went into the hands of a receiver. Only a year prior to that date, this corporation was paying 12% in dividends and the stock was selling well above par. There were many badly inflated stocks and many rotten spots in the speculative stock markets. The Distillers and Cattle Feeders shares fell from $70 to nothing, and were assessed $20 per share. The aggregate liabilities of business failures in 1893 were almost $350,000,000, over 20% greater than in 1892. Banks failed right and left, and several leading railroad companies went into the hands of receivers.

In 1903, another period of depression occurred. It is doubtful if this period can be rightly classed with the other crises already mentioned, for it was more in the nature of a drastic but orderly retrenchment than a panic, and the bull stock market of 1902 was again in full swing early in 1904.

In thus briefly detailing the crucial points of nineteenth century financial affairs, there is no intention of entering an economic discussion, and no pretence of giving anything like a comprehensive history of the events preceding or following their recurrence. The su

discussed is speculation, and the object sought is to gain knowledge that may be of value in forming opinions as to future prices. We may gain some information of this character by analyzing the following points:

1—Did price declines in stocks precede, accompany, or follow panics, crises, or general business depression?

2—What are the signs which usually precede such periods?

3—What are the salient causes?

4—Can any dependence be placed in the regularity of these recurrences?

On the first head it will be found that in all cases the top of the stock market has been reached prior to the actual eruption in general business. Stock speculation in 1814 and 1826 was not of great volume nor importance, and cannot be given much consideration.

Beginning with the panic of 1837 we find that the highest prices for stocks were made in October, 1836, while panic conditions did not occur until May, 1837. Preceding the panic of August, 1857, highest prices were reached in the last months of 1856. Highest figures were recorded in April, 1872, just one year prior to the panic of 1873. The stock market anticipated the troubles of 1884 by 17 months of declining prices. In January, 1892, stocks began declining and continued their downward course until the panic of 1893 cleared the at-

mosphere. In our last period of depression (1903) stocks had reached their pinnacle in September, 1902, just one year before the market turned for the better.

We find therefore that in the majority of instances, highest prices for stocks were reached long before business troubles were openly apparent. This action represents to a certain extent the selling of stocks by men who were wise enough to foresee trouble.

Another interesting fact in regard to crises is that they are usually preceded by record-breaking business in all directions. As iron and steel may be considered the best barometer of business conditions, the following tables are instructive:

PIG IRON PRODUCTION IN THE UNITED STATES SINCE 1860.

Year	Production Tons
1860	919,770
1861	731,544
1862	787,662
1863	947,604
1864 (Depression)	1,135,996
1865	931,582
1866	1,350,344
1867	1,461,626
1868	1,603,000
1869	1,916,641
1870	1,865,000
1871	1,911,608
1872	2,854,558
1873 (Depression)	2,560,963
1874	2,401,262
1875	2,023,733
1876	1,868,961
1877	2,066,594

Year	Tons
1878	2,301.215
1879	2,741,853
1880	3,835,151
1881	4,144,254
1882	4,623,323
1883	4,595,510
1884 (Depression)	4,097,868
1885	4,044,526
1886	5,683,329
1887	6,417,148
1888	6,489,738
1889	7,603,642
1890	9,202,703
1891	8,279,870
1892	9,157,000
1893 (Depression)	7,124,502
1894	6,657,088
1895	9,446,308
1896	8,623,127
1897	9,652,860
1898	11,773,934
1899	13,620,703
1900	13,789,243
1901	15,878,354
1902	17,821,307
1903 (Depression)	18,009,252
1904	16,497,033
1905	22,992,380
1906	25,307,191

It will be observed that the high record of production has been reached just prior to our greatest periods of depression, or during such periods.

The second phase of the question, "what signs usually precede such periods?" opens a wide field for the student of speculative changes. Some inspiration may be gained from an examination of the two points already considered, i.e.: priority of price movements

and business inflation; but it would be extremely difficult to use them as guides unless many other factors were given consideration. If we eliminate the element of periodicity, any attempt to determine the turning point by examination of advances in prices of stocks or volume of production and consumption of commodities is futile. Using pig iron as a barometer we might, after production has gradually increased from 8,623,127 tons in 1896, to 15,878,354 in 1901, argue that a considerable reaction was due in this line, but we would be out in our calculations two years and two million tons. Neither can we accept the simple fact of a decline, or the beginning of a decline in iron or in any other single commodity as indicating lower prices for stocks; for however accurate iron may be as a barometer of general business, it is not at all a barometer of the stock market. It is practically certain that stock prices will move either to higher or lower prices long before any reasons for such movements are apparent to the ordinary observer. Future stock market movements are largely deductive, and are not founded upon ordinary industrial statistical evidence.

There is, however, one method by which some light may be thrown upon the subject of probable movements. A careful study of monetary conditions and expansion of credits will

frequently reveal dangers not apparent in any other direction. It is scarcely necessary to say that such examination must not be confined to one quarter, such as New York City; or to one country, such as the United States. A comprehensive view of the world's monetary conditions will be necessary. This subject is dealt with more fully in another chapter.

There is much difference of opinion among writers and students of economics as to the cause of depressions. Bagehot attributes it to the fact that, "at particular times a great many stupid people have a great deal of stupid money." This writer contends that occasionally money accumulates abnormally and craves an investment outlet. To use his own words, "This blind capital seeks for some one to devour it, and there is plethora; it finds some one, and there is speculation; it is devoured, and there is a panic." Horace White attributes panics to over-speculation. Bonamy Price says: "A vast outlay in new enterprises involving a large consumption of food and materials, whether in the way of pure waste or temporary unproductiveness, ought always to suggest a feeling of danger. This excess occurs in seasons of prosperity." John B. Clark holds that it is due to an excess of production; or an excess of production in one line with a deficiency in others. Leone Levi: "The main

cause for the occurrence of crises is the sudden realization of an insufficiency of capital to meet present demands." Thorold Rogers says: "The cause exists in the function of exchange; in the expectation of unreasonable profits and in incorrect calculation." It was the late Henry George's theory that depressions are brought about by higher prices of land. He held that workers thrive as they have easy access to natural opportunities for production, and are impoverished as they are deprived of such opportunities. All periods of speculation and inflation end in higher land values. Landlords call for a larger percentage of the product than workers can afford to pay, and both labor and capital become idle until there is a readjustment. Prof. W. S. Jevons, and a host of others, attribute crises to sun spots and their effects on harvests. And so on through a long line of theories.

The consensus of opinion appears to favor the theory of over-speculation, whether in realty, commodities, or the shares of corporations, and this leads up to the question of periodicity. That there has been a recurrence of these troubles about once in ten years is not a debatable question. Nevertheless, many thinkers scout the idea of this repetition at marked periods being other than fortuitous. As prominent a student as Thorold Rogers, for

example, ridicules the theory of periodicity. Many hopeful people believe that in time we will find means to avoid these bad spots; that the United States is a young and enthusiastic country, and that we will gradually sober down in both methods and effects. But against this theory lies the cold fact that these cycles have occurred with as charming regularity in France and England as they have in our own country, which would indicate that age and seasoning does not produce any appreciable improvement.

It is probable that the most acceptable theory as to the causes of periodicity is the psychological contention. Human nature is much the same throughout the civilized world. We suffer from a panic and a period of depression, and we grow wary and conservative. This course results in sound methods and accumulation. The business structure rests on a firmer foundation. Gradually the hard lessons of the past are forgotten by the older generation, and are entirely unlearned by the new business generation, all of whom are optimists. Again we expand our enterprises, again fortune favors us; the appetite for gold grows greater as wealth accumulates; men who were economical and satisfied on modest incomes now live extravagantly, and some of them dream of millions. Capital is spread out thinly. Story after

story is erected on one foundation, and that foundation, sound enough at first, eventually gives way. Then we must begin our careful building once more. The ten year periods, therefore, may represent with more or less accuracy, the lapse of time between wisdom and folly,—the yard-stick of human intellect and experience.

Many of the writers on this subject seem to strive for tangible reasons for each depression. They dive into the subject for a cause and emerge with an effect, or a handful of effects. For example, the depression following 1893 was not caused by the failures of banks and other business institutions, but the failures were caused by the depression. It matters not that the failures ante-dated the bad conditions. Again, the depression itself was produced by prior inflation. It was the illness after overstimulation. And so, in turn, we can ask what caused the inflation; and the answer is "Human greed and human folly." This last analysis brings us around in a circle to the original theory of a psychological cause.

It is submitted that a dependence on periodicity of any kind, either in the ten year cycles or in year-to-year events is fraught with danger and cannot be adopted by the speculator. It is chart-playing pure and simple, and the man who disposes of his stocks for no better reason

than that a depression appeared ten years ago, is liable to find himself in the position of the chart-enthusiast, who, after tracing a marked uniformity in movements for a period of years, runs into reverses and loses all.

It is not meant to say that a knowledge of the past is without value. Inductive reasoning is almost as important as deductive reasoning, when properly employed and applied. If we scrutinize the history of past crises and great movements with a view to determining the salient causes therefor, a great deal has been gained, for we may apply this knowledge to existent elements lying parallel to those which caused trouble in the past, and thus decide what is probable in the future. If, on the other hand, we place dependence on mere repetition, we gain nothing in education and stand in constant danger.

It may be contended that the active speculator has little to do with ten year cycles or their causes, but this is not the case. A correct understanding of the reasons for the great cycles will simplify the study of smaller intermediate movements. Much knowledge applicable to year-to-year movements will be gained. Monetary troubles, for example, occur almost annually, and their effects on market movements are usually, (not always), similar to those of more widely separated periods, but, of course, in a lesser degree.

III

The Gold Supply

It may be stated without hesitation that the effect of the increasing supply of gold upon prices of all bonds, shares, or commodities which may be classed as speculative, is more decided and certain in its operation than any other single factor. The process of readjustment due to this cause would be slow and regular if the principles at issue were universally and clearly understood. Not being generally recognized, however, the changes wrought by what is naturally an insidious factor are, at times, spasmodic and feverish. It is a remarkable fact that whenever a revolution occurs in any economic or financial process which is, by its nature, concealed or recondite, its existence and influence are discovered by a number of students simultaneously but independently. Important reversions or modifications may be submerged for a long period, and suddenly light is offered from all parts of the thinking world. It is probable that this intellectual phenomenon extends to, or is

communicated to the financial world, and that marked and drastic changes in the affected quarters represent a belated recognition of forces hitherto unknown, and the readjustment of affairs by those who see first and furthest. That the operations of this minority will be important goes without saying. The faculty to grasp fully and quickly anything salient bearing on financial affairs is the ground-work of riches and consequently the trained minds of great holders of shares or commodities will respond most readily to sound basic arguments, and the greatest holders can often make of their knowledge a two-edged sword. For example, certain large holders of bonds, recognizing the fact that increasing gold production means higher interest rates, and consequently lower prices for bonds, would be able to dispose of bonds to advantage because of the apparent general prosperity growing out of this same production of gold. It may be assumed that in pointing out in interviews, etc., this reign of prosperity, the gentlemen in question would modestly omit to mention that the same influences which were causing high prices and much business in some quarters, were working damage in others.

Something of this kind has been going on in our bond and stock markets of late. The inevitable influence of gold on prices has made

itself slowly felt for a long period, but it is only in the last year that a considerable number of individuals whose operations are of importance in the financial world have come to recognize how powerful this influence is. Price changes in divers securities and commodities hitherto unaccounted for, or attributed to wrong influences, have suddenly been explained to a number of important financiers, and a correct understanding of the problem has undoubtedly resulted in radical readjustments in some quarters. With that pertinacity in error which seems to distinguish the ordinary speculator, he has, however, gone on attributing these processes of equilibration to causes which have only a limited bearing on the case. The recent heavy decline in bonds and stocks, for example, was popularly ascribed to political and legislative action against railroads. Scarcity of money was given second place in these deductions, and gold production third place, or no place at all. If we reverse this order of importance and give gold production first place, monetary affairs second place, and political affairs third place, we are nearer the truth. It looks a little ridiculous that the scope of intelligent perspective should be blocked by three thousand miles of water, and that the unthinking majority who ascribe our decline in bonds to local politics should have failed to

recognize so potent a fact as that the decline was world-wide; but such is the case. The readjustment in bonds was due to excessive over-production of gold, and it may be safely assumed that so long as this over-production continues to increase rapidly, bonds will continue low in price or, what amounts to the same thing, interest rates will remain high.

As to the importance of a correct understanding on this subject of gold supply and its influence on prices, I quote from Mr. Byron W. Holt's book "The Gold Supply and Prosperity," which, I may add, is used as the text book for this chapter. Mr. Holt says:

"This is the great problem that now confronts the financial world and demands solution of every investor. Not to solve it may mean great loss and possible failure. To solve it means success and greatly enhanced wealth for all who now have either a fair share of this world's goods or who have credit and can intelligently go in debt for a large amount."

As speculation or investment-speculation, as defined in the introduction to this book, are the subjects under discussion it is the intention to take up, in turn, such points as bear particularly upon price changes of speculative shares and commodities influenced by our increasing supply of gold. The main points to be considered are as follows:

1—The effect upon bonds and preferred stocks having a fixed rate of income.

2—The effect upon common stocks of railroad corporations.

3—The effect upon stocks of industrial corporations.

4—The effect upon speculative commodities —wheat, corn, oats, cotton, etc.

For the purpose of argument it will be assumed in this discussion that our supply of gold is rapidly increasing. We know that such has been the case in recent years, and it is the opinion of most students that this increase may be confidently expected to continue. To quote again from the work already mentioned:

"Both the output and supply of gold are likely to increase for many years.

"While the future output of gold is, of necessity, unknown and uncertain, there is great unanimity of opinion, among mining experts, on this point. It appears to be generally recognized that, during the last twenty years, the industry of gold mining, or rather of gold production, has been established on a very different and much more certain basis than any previously existing. No longer is the output of gold dependent mainly, or even largely, upon placer mining and the chance finds of 'free' gold. The supply of gold, in rock, sand, clay, and water, being inexhaustible, it is now possible, by machinery and metallurgical processes, to extract gold, in paying quantities, from many forms of these vast storehouses. To such an extent is this true that the future supply of gold is even more secure than is that of coal, iron, lumber, wheat or cotton.

"Even if prospecting were to stop and attention

were to be devoted only to the gold mines and bodies already discovered, and geologically in sight, it is probable that the output of gold would continue to increase for many years. As Mr. Selwyn-Brown, a gold mining expert, tells us in his very interesting article, 'as the rich surface deposits are being worked out, improvements in mining and metallurgical processes are enabling poorer and poorer deposits to be worked.' That is, improvements in 'stamp mills,' cyanide mills, dredging machines and other gold extracting apparatus and processes are being made so rapidly that it is, every year, becoming profitable to work lower and lower grades of ore, sand and earth. As the grade declines the quantity in sight increases rapidly. In fact there are almost literally mountains of low grade gold ore that can even now be worked profitably. Some of the largest, most productive and most profitable mines of today contain ore averaging less than $3 and, in some instances, only $2 of gold per ton.

"The supply of such ore being inexhaustible the output depends upon the number and size of the mills employed to extract the gold. It is reasonably certain that, for years to come, the improvements in methods and processes of mining will more than keep pace with both the decline in the quality of the ore and the increase in the cost of mining due to rising prices and wages, occasioned by the depreciation of gold.

"In view of all the facts, Mr. Selwyn-Brown's conclusion that 'a progressive increase each year may confidently be expected' is conservative. This conclusion, is almost a certainty. The uncertainty lies in the possibility, if not probability, either of discovering many important new mines in the practically unexplored parts of every continent, or of

making improvements that will radically reduce the cost of extracting gold. In either case the increase in the output of gold might be not simply arithmetically but geometrically progressive."

Admitting that the question of gold production is debatable, it remains for the future to develop any radical change, and it will be necessary for the student to decide this point for himself either by the light of facts as yet not established, or by accepting theories as yet not convincingly erected. If a change occurs, or may reasonably be expected, an understanding of the subject from the positive side of the question loses none of its value. The principles involved could be as successfully applied in reading the probable future by modifying or reversing effects, and reconciling them to a modification or reversal in the cause. If, for example, we accept the theory that increased gold production means advancing commodity prices, and find reason later to believe that gold production will cease to maintain its ratio of increase, we may alter our views accordingly so far as this single influence is concerned.

1—The effect of the increasing gold production on bonds and preferred stocks having a fixed rate of income.

In this division of the question the crux of the whole matter is interest on money. The question might, in fact, be stated thus: "What

is the effect of increasing gold supply on money interest rates?" and having solved that problem, the original inquiry is answered.

To reach a reasonable solution we must first examine the effect of an unduly increasing supply of gold on commodity prices. Over-production in any quarter inevitably leads to lower prices. Gold being a fixed standard cannot decline in figures, but it does so in fact. That is to say, the flexible prices of things which gold will buy rise to fill the gap. Thus, since 1896, prices of commodities have risen 50%. The man who loaned money ten years ago finds its purchasing power impaired 33 1-3%, when it is returned to him today, for the reason that commodity prices having advanced 50% in the interim, his dollar will now buy only 66 2-3% of what it would buy in 1897. This impairment of principal will be covered, in part at least, by interest rates. This effect, if not recognized and arbitrary would adjust itself automatically, regardless of whether or not investors recognize the influence of changing values of gold, for money, finding higher returns in other quarters, would speedily desert the long-term, fixed-interest investment field, and prices of such securities would decline through lack of demand.

On the subject of interest rates Mr. Holt says:

"But there is another reason why interest rates should be high when prices are rising. When money is shrinking in value interest rates should be high to make up, or partly make up, the losses on the principals of loans. To illustrate: Suppose that prices are rising 10% a year. This means that the purchasing power of money is declining about 10% a year. Suppose, then, that $100 were loaned for one year at 5%. At the end of the year the lender would have $105; but with this $105 he could buy only about as much as he could have bought with $95, at the beginning of the year. In reality, he has received no interest at all but has, instead, paid $5 to the man for holding his $100. The man with money to loan cannot afford to do business in this way. He is usually as wise as are his neighbors, and fully as able to protect his own interests and to get all his money is worth, either by buying real property, investing in bonds and stock or by loaning on notes or on call."

In submitting the above contentions it must be fairly stated that there is some diversity of opinion as to the effects of gold on interest rates. A few writers demur to the theory; others hold that the effect is nil, and one or two openly adopt the negative side of the discussion, and state that more money means lower rates of interest. The majority of recent investigators, however, appear to be accepting the theory as given herein, and it may be added that prices of the class of securities considered have borne out the hypothesis faithfully, and that the minority have failed to offer

convincing explanations of this readjustment. It will not do to point to the fact that money has been fully employed in constructive rather than investment fields of late; for while this is true enough, it does not explain why gilt-edged bonds such as British Consols have declined in value, while stocks and shares which did not bear the onus of circumscribed returns have advanced. There are, of course, contributory causes: the Labor-Socialistic Government in England no doubt affects the prices of consols, but this influence is specific, and loses most of its force when we consider that not only these particular securities, but practically all others of their class the world over have suffered a radical decline. In other words, interest rates have grown comprehensively higher. The theory appears sound, is borne out by events, and mere denial does not weaken it. It may well be accepted until its opponents succeed in giving us something more convincing in its place.

In support of the theory, Mr. Holt reproduces the following table of British bonds from Moody's Magazine for October, 1906.

PRICES OF BRITISH INVESTMENT BONDS.

	%	1906	1905	1904	1896
British Consols...	2½	86½	89⅛	88½	*113⅞
Met. Consols.....	3½	102	104	104½	128¾
London County...	3	88½	94½	93	128¾

	%	1906	1905	1904	1896
Leeds	4	108	109	111½	130½
Liverpool	3½	107	109	109	144¼
Manchester	4	123	128¾	124¾	159
New South Wales	3½	100½	100	96	112¼
Queensland	3½	99½	99	96	111½
Canada	3	98½	100½	97	107¼
Cape	3½	97	98	95	120
Lon. & N. Western	3	93	96	95	124¾
Midland	2½	76	79	78	†124¾
Great Western	4	123	127	123½	164
Average	3.3	100.2	101.8	100.9	128.4

* Then 2¾%. † Then 3%.

"Thus," comments the writer, "these 13 British bonds, supposedly the safest and least speculative of all securities, have declined an average of over 28 points in ten years. Considering incomes and present prices, the unfortunate investors in these bonds have not only received less than 1% on their investments, during the last ten years, but, should they sell their bonds, they would find that the proceeds have lost 30% of the purchasing power of a similar amount ten years ago. Altogether, they have suffered a net loss, over incomes, of more than 20%, or over 2% a year."

There are other economic influences affecting interest rates through gold supply, but the one given appears to the writer the most direct and forcible when applied to readjustment of prices to income.

In weighing the influence of increasing gold production and its effect upon interest rates through the advancing prices of commodities, the student is liable to fall into one grave error.

He may perhaps jump to the conclusion that gradually advancing prices of commodities mean gradually advancing rates of interest. This is not at all the case. A sustained ratio of advance means sustained high rates of interest—nothing more. In order to make this clear let us go back to the original principle.

Increasing prices for commodities mean an impairment of the purchasing power of money. If the purchasing power of money is impaired 2% per annum through increasing prices of commodities, and the normal rate of interest is 4%, we can cover the deficiency by making the interest rate 6% and leaving it there as long as this ratio of impairment is maintained. In other words the man who loans $1,000 at 6% loses $20.00 per annum in the impairment of capital and receives normal interest of $40.00 per annum and $20 extra to cover his loss in capital. Strictly speaking the extra 2% is not interest at all, but an amortization payment. It matters not how high prices ultimately go, he receives each year a bonus sufficient to cover his loss in capital, and the interest rate remains 6%.

Therefore, if prices of commodities advanced for ten years and then ceased to advance, but were maintained at the highest figures reached, interest rates would fall because there would be no further impairment of capital, and what

was formerly amortization, would become usury. On the other hand, if a new ratio of increase should occur in commodity prices and they should advance 4% per annum, interest rates would, if fully adjusted, reach 8%—4% for normal interest, and 4% for impairment of capital.

2—The effect upon Common Stocks of Railroad Corporations.

Here the effect of high interest rates is, or in time may be, offset by returns in the form of dividends, undivided profits, improvement of property, or the fact that income is not limited. But there is another trouble, and a serious one, for which the gold supply is responsible.

If the increasing supply of gold is responsible for higher commodity prices it must be at once apparent that the building, equipment and maintenance of railway properties costs more and more as all commodities, including labor, advance in price. This would be all right if the selling commodity, i. e.: transportation, also advanced proportionately in price; but it is so difficult to override popular prejudice and widespread misunderstanding on this point, that we find continued agitation and legislation not only against advancing rates, but with a view to reducing those which already obtain. There must, of course, be a limit to this thing,

and if the cost of production continues to increase, the railroads must be permitted to demand higher prices for transportation. Otherwise a point would finally be reached where every railroad in the country would be forced into bankruptcy. The great danger lies in a belated assimilation of this truth by the masses, and too much demagoguery on the part of politicians who do understand, but, being politicians, prefer to reflect the views of a majority of constituents, rather than to enter a campaign of proselyting. That evils have been fostered and wrongs committed by eminent railroad financiers is certain; but there is considerable confusion of ideas on this head. Over-capitalization, illegal combinations, manipulation of funds for private gain, and the swelling of dividends for stock-jobbing purposes, when the funds so distributed should have gone into improvements or surplus, have all played their part in arousing the wrath and indignation of the great majority, and they are, as a class, prone to jump to the conclusion that any and every railroad corporation is charging unduly high rates for its services, and making exorbitant returns on invested capital. This has, no doubt, been more or less true in the past in certain cases where extremely high rates were made, and the apparent returns on money attenuated by over-capitalization; but

this evil is gradually decreasing, and the real fight is, or should be, against these abuses. The railroads are suffering for the sins of the past, and may suffer still further; but the time is not far distant when, unless conditions change radically, the railroads must be allowed more latitude in the adjustment of rates.

The prevalent opinion, that needed reforms which strike at the root of the evils mentioned above is a bear argument, is another popular fallacy. Such reforms intelligently conceived, and unswervingly carried out, are all in favor of the small shareholder. If laws can be enacted which will prevent individual interests from plundering or misusing the funds of corporations, and which will compel these corporations to issue reports and statements which are not so involved and complex as to be beyond the ordinary comprehension, the small holder or investor will have a better show. But, having cured these evils, no laws can possibly endure which contemplate curtailing fair returns on money, and fair profits through natural enhancement in values.

But, however fair or cheering this view may appear, the fact remains that it will be slow in its acceptance and slower in its operation. We may therefore summarize the situation thus. Increasing production of gold brings about increasing cost of operation, and so long as cost

of operation is advanced with no corresponding advance in selling price of transportation, the ratio of profits will gradually decrease until a vanishing point is reached.

In the last analysis, a probable tardy and reluctant recognition of the true status of the case warrants the belief that for the near future, the railroads have a hard time ahead of them, and that so far as this single important influence is concerned, it is decidedly a bearish factor.

3—The effect upon stocks of industrial corporations.

Here we have a different proposition. Rising prices for commodities do not interfere with the earning power of corporations which produce and sell commodities, the prices of which are not limited by law. In fact these corporations are, in many cases, gainers by this influence which tends to advance prices, not only of what they buy, but of what they sell. It may be added, parenthetically, that railroad companies which own valuable coal lands, etc., find the bad influences already discussed partially offset by the gain from such holdings. The railroad company, however, may be considered as pre-eminently a seller of transportation and has been so regarded herein.

The industrial corporations whose products

are subject to regulation by law, such as gas and electric lighting companies, are subject to practically the same influences as those which operate against the prices of railroad stocks. Their cost of production advances easily and inevitably, and the selling price remains fixed, or advances with difficulty and under protest.

4—The effect on speculative commodities—Wheat, Corn, Oats, Cotton, etc.

This phase of the subject will be dismissed with a few words. If the contentions already made are accepted, it is apparent that all such commodities will gradually seek a higher level. A brief examination of statistics will show that this readjustment has been going on for years. The gradually ascending pivotal point, or average price, is particularly marked in the cheaper cereals,—corn and oats, and also in cotton. This is probably due to the fact that wages have not advanced as rapidly as have prices of living. It is found that in periods of hard times consumption of cheaper foodstuffs and textile fabrics is increased, while the consumption of higher priced commodities and luxuries are curtailed. The wage-earner, therefore, has been in reality living in a regime of hard times, although this fact is easily submerged by steadier employment, by a fictitious appearance of general prosperity, and the abil-

ity to spend a larger number of dollars, without realizing fully the loss of purchasing power in the dollars.

It would be out of the question to attempt to enter anything like a comprehensive study of the question of gold production and its effects in a single chapter, or even in a single volume; neither is it necessary to the purposes of this work, for the student who desires a comprehensive education in this regard will find ample means and material ready to his hand. From the standpoint of investment and speculation alone, it is submitted that increasing production of gold is, to use the phraseology of the street, bearish on long time bonds and other securities yielding a limited rate of interest or income, temporarily bearish on railroad stocks, bullish on industrial shares, except as noted, and bullish on speculative commodities.

At the risk of indulging in undue reiteration, attention will again be called to the fallacy of considering such subjects as the one of gold production too remote in concrete effects, or too sluggish in operation to be of importance to the speculator. A thorough understanding of cause and effect bears upon the operations of today, in that it anticipates the results of tomorrow. Through knowledge of influences of this character, serious error may be avoided. For example, one of the profound

axioms of the speculative world is that bonds advance first and stocks afterwards. If we understand why bonds have been, and are at present, declining we may be justified in modifying this view and considering the axiom more or less obsolete. He who operates an engine without a clear understanding of its motive power is likely to get into trouble, or perhaps be blown up.

It may be pointed out also, that a too literal acceptance of the suggested effects of this or any other great price influence is highly dangerous. Even while gold production continues to increase rapidly, prices, not only of shares, but of all things, will overleap themselves and will also swing backwards to the other extreme. The cycles are not completed, until both zenith and nadir have been touched. Changes in gold production will not prevent declines in prices; they will, however, interfere with the regularity of the cycles.

This chapter may be fittingly closed with the following list of conclusions reached by Mr. Holt, in the work already mentioned. These conclusions cover all the points herein presented, and others which are of interest and value:

"1—That both the output and supply of gold are likely to increase rapidly for many years.

"2—That, therefore, the value of gold will depreciate as the quantity increases.

"3—That this depreciation will be measured by the rise in the average price level.

"4—That a rising price level, if long continued, is accompanied by rising or high interest rates.

"5—That high interest rates mean lower prices for bonds and all other long-time obligations drawing fixed rates of interest, dividends, or income.

"6—Rising prices increase the cost of materials and of operation and tend to decrease the net profits of all concerns, the prices of whose products or services either cannot be advanced at all, or are not free to advance rapidly.

"7—Rising prices tend to increase the net profits of all concerns that own their own sources of materials and supplies.

"8—Rising prices of commodities tend to cause the prices of all tangible property to rise. This includes lands, mines, forests, buildings and improvements.

"9—Rising prices of commodities and property tend to increase the value of the securities of corporations holding commodities or property.

"10—Rising prices and cost of living necessitate higher money wages, though the rise of wages will follow, at some distance, behind the rise of prices.

"11—As rising prices do not mean increased profits to all concerns, many employers will not concede higher wages without strikes.

"12—Rising prices and wages, therefore, mean dwindling profits and troublous times in many industries, with complete ruin as the final goal.

"13—Because wages will not rise as fast or as much as prices and the cost of living, there will be

dissatisfaction and unrest among wage and salary earners.

"14—Rising prices of commodities and property encourage speculation in commodities, stocks and real estate and discourage honest industry.

"15—Thus, rising prices, by diminishing the incomes of 'safe' investments in 'gilt-edged' bonds and stocks and by increasing the profits of speculators encourage extravagance, recklessness and thriftlessness.

"16—As rising prices decrease the purchasing power of debts, and thus aid debtors at the expense of creditors, they discourage saving and thrift.

"17—Rising prices, then, by promoting speculation and extravagance, increase consumption, especially of luxuries, and, therefore, stimulate production.

"18—Rising prices, then, result in what is real prosperity for many industries; but what is for a nation as a whole, artificial or sham prosperity—the result of marking up prices rather than of increasing production.

"19—With prices, wages, rates and industries always imperfectly adjusted to the ever depreciating value of gold, and with instability and uncertainty throughout the financial world, there cannot but be a great shifting around of values and of titles to property.

"20—As this shifting is to the advantage of the debtors—the rich—and to the disadvantage of the creditors—the great middle class—it results in rapidly concentrating wealth in the hands of a comparatively few.

"21—For all of these reasons a prolonged period of rapidly rising prices is reasonably certain to be-

come a period of unrest, discontent, agitation, strikes, riots, rebellions and wars.

"22—A rapidly depreciating standard of value then, if long continued, not only produces most important results in the financial, industrial and commercial world, but is likely to result in changes of great consequence in the political, social, and religious world.

"In view of all the facts, results and possible consequences connected with the increasing output and supply of gold, The Wall Street Journal was right when, on December 4, 1906, it said that 'No other economic force is at present in operation in the world of more stupendous power than that of gold production.'"

IV

Money

From the viewpoint of the speculator, money conditions require constant consideration. It goes without saying that no sustained bull market is possible unless money conditions favor such a movement. We find that at the end of a period of inflation, the credit situation is always strained, while a general recession in business will usually cure the evil.

The student may enter this large and important branch of the subject as deeply as he likes. There are many excellent works dealing with the various phases of the subject, and the question has been so long and carefully studied by writers, that many important points have been established so definitely as to admit of little diversity of opinion.

The bank statement which is issued weekly by the New York Clearing House, is eagerly scanned by traders, but it is not always the case that this scrutiny is thorough or enlightening. The statement at its best, cannot be considered more than a barometer, and its

showings are by no means exact, as it is based on a system of daily averages. That is to say, the banks figure their loans, deposits, etc., for each day of the week, and report the averages to the Clearing House. This method often leads to a false showing. Commenting on this fact, Mr. S. S. Pratt in his book, "The Work of Wall Street," says:

"A striking illustration of the effect of the law of averages upon the Bank Statement was given in September, 1902. The statement of September 20 reported a loss in cash of $7,300,000, while the actual loss, so far as it could be estimated, was only $3,600,000. The statement of September 27th, on the other hand, reported a gain in cash of $1,790,000, while the apparent loss was $4,000,000. The former statement reported a deficit in reserve; the latter a surplus."

It is the practice of many speculators to examine the bank statement merely as regards the changes made from week to week, without reference to the more important totals. A decrease in reserves is considered an evil, etc. There is something in this of course, but such methods and deductions are incomplete and insufficient. A decrease in reserves when the surplus is very large may be practically meaningless, while the same amount of decrease when reserves are small may be significant. It

is a good deal like the difference between a man spending a dollar when he has a hundred, and spending his last dollar.

The most important general information to be gained from the bank statement, is by a comparison of loans with deposits, and specie with loans. We may thus arrive at a fairly correct idea of the state of trade and the expansion of credits. If we find that loans are in excess of deposits, and the percentage of specie small, we may, with certain qualifications, deduce inflation; while on the other hand, the extent of liquidation may be judged in case these conditions are reversed. As an example of this process, the following historical facts are given.

In 1890, twenty stocks listed on the New York Exchange were selling at an average price of about $87 per share. The percentage of loans to deposits was about 95% and the percentage of specie to loans about 20%. In November of that year, loans advanced to 102% as compared with deposits, and specie declined to about 18% of loans. The stocks mentioned declined to an average price of $64 per share, and later in 1891 to about $61 per share. From 1891 to 1893 there was some alternate improvement and retrogression in money conditions, all of which was accurately reflected in stock prices.

In 1893, the proportion of loans to deposits rose to about 109%, and proportion of specie to loans declined to 13%. The average price of the twenty stocks reached about $47 per share. (The panic of 1893).

In 1894, the proportion of loans to deposits fell to 80%, and specie to loans rose to 30%. This was due to the liquidation of 1893. Stock prices showed some betterment, rising to about $57 per share. The severe drubbing of 1893 had made public investors nervous, and had in many cases incapacitated them for stock market operations. That was to come later.

In 1896, the proportion of loans to deposits rose to 102%, and specie to loans fell to 10%. Stocks reached their lowest level in July of this year ($42 per share for the twenty stocks mentioned).

From 1896 to 1898, a gradual improvement was apparent. Through all this period stock prices faithfully reflected money conditions. In July, 1898, the proportion of specie to loans rose to 30% and loans to deposits fell to 83%. Stocks began advancing and in March, 1899, the average price of the twenty stocks considered, was about $85 per share.

In June, 1900, the average price of the twenty stocks considered, was about $75 per share. The proportion of specie to loans was about 22%, and the proportion of loans to de-

posits was about 90%. From January, 1901, until September, 1902, money conditions did not improve, but stocks continued to advance. There were large crops and a general wave of expansion and prosperity swept the country. In September, 1902, the proportion of loans to deposits was 99%, and the proportion of specie to loans about 17%. Meanwhile stocks were high—$128 per share for our twenty stocks. Conditions, though temporarily ignored, asserted themselves in 1903, and in September of that year, the average price of the twenty stocks was about $88 per share; the percentage of loans to deposits 101% and specie to loans 19%. The money situation had not changed materially, but the stock market was making a deferred payment.

In August, 1904, the proportion of loans to deposits had fallen to 90% and specie to loans had risen to 25%. The stock market was steadily advancing, and in January, 1906, stocks reached their pinnacle—$138 per share for the twenty securities considered.

It will be observed that while stock market movements do not always immediately reflect good or bad conditions in the financial world, the effect is ultimately felt. We are pretty safe in assuming that whenever loans are unduly expanded and the percentage of specie is small, these conditions must be corrected

either by a halt in business or by liquidation; and the word liquidation here means a cleaning up in other lines, as well as in the stock market. It is sometimes the case that after the stock market has suffered a severe decline, there is little improvement in the monetary situation as shown in the bank statement. In January, 1907, for example, the percentage of loans to deposits was about 102%, and specie to loans about 17½%. The average price of twenty active stocks at that time, was about 130. At the present writing (June, 1907) those same shares have fallen to an average price of about 101, and there is no appreciable change in the relation of loans to deposits, or specie to loans. On June 8th, 1907, the bank statement showed loans to deposits 102%, and specie to loans a little below 19%. This state of affairs would naturally lead to the belief that unless we are vigorously assisted by some powerful factor, such as good crops, we now face a period where either a decided slowing up or an actual recession in general business is imperative. On this theory, fortified or modified by a study of extraneous effects, the speculator or investor may gain a valuable knowledge of probable future movements in the stock market. If he decides that the case is a bad one and that a set-back in business will occur, he may argue that, even if stocks are low in

price, there is little hope of a material upward movement in any quarter. It would also be evident that the industrial shares would suffer more in price than the railroad shares; for, under present conditions, a decline in the price of products generally helps the railroad corporations to some extent by permitting advantageous purchases. For instance, if finished steel and iron products decline in price, the railroads might be enabled to carry out projected extensions to better advantage than otherwise, while the manufacturing companies would suffer a considerable loss of profits. It is, of course, true that a recession in business is felt in all lines, but as the selling rate of transportation is more fixed than prices of commodities, and as the producing companies gain less by a recession in the prices of the commodities they buy than do the railroads, the industrial stocks are more adversely affected. This may appear as a sort of compensation for the fact that while rates for transportation do not advance as easily as prices of commodities, neither do they fall as rapidly in periods of depression.

In examining the bank statement as a barometrical showing of money conditions, it should be remembered that an increase in deposits does not mean an increase in cash. The bank statement may show an increase in loans of $1,000,000 and an increase in deposits based

on these loans. That is to say, $1,000,000 may have been borrowed on commercial paper, and the proceeds passed to the credit of the borrowers. Commenting on this fact, Theodore Burton says:

"But in the modern development of banking the actual money deposited is much less important in determining the amount of deposits, because so large a share of them represents credits obtained by loans, etc. These credits are transferred upon orders executed by depositors, and furnish a substitute for currency. In proportion as payments and settlements are made by checks, drafts, and bills of exchange, deposits maintain an increased proportion to the amount of currency in circulation. This class of deposits increases prior to a crisis rather than diminishes, because loans increase.

"In the reports of national banks, there is a striking correspondence from year to year in the volume of deposits and that of loans and discounts. Deposits show more frequent fluctuations, but rise and fall in general accord with loans and discounts. This correspondence is easily explained. Another distinction should be noted. Some deposits are the result of completed transactions, and are based upon the proceeds of sales made, amounts realized from investments, etc. Others merely represent loans or discounts the proceeds of which are entered to the credit of the borrower. Before every crisis there is an unusual proportion of deposits which are based upon loans. If in bank statements there could be separate columns for these two kinds of deposits, the information afforded by their increase or decrease would be much more valuable."

This point shows the necessity of considering not only the proportion of loans to deposits but of specie to loans. On this point Mr. Burton says:

"A continuous decrease of specie attended by an increase in outstanding discounts is always a danger signal. The gap between the two may widen for months, and even for years, and may fluctuate from time to time, but a sudden change of large proportions, or a steady decrease of the percentage of specie is an unfailing indication of danger. The reason for this is not hard to discover. The quantity of metallic money in a country shows what part of its capital is available as money for the payment of its obligations to foreign countries, the final test of availability. For this last named purpose credit money cannot be used, but only money having intrinsic value—money of the Mercantile Republic, as it is called by Adam Smith."

The conclusion reached therefore, is that an increase in loans and discounts with no corresponding increase in cash or with an actual decrease in cash, reflects a bad state of affairs, even when the advance in loans and discounts appears to be fully offset by deposits.

There is one feature which should not be overlooked. The very worst state of affairs may be shown in the bank statement during a period of great commercial activity and inflation in all lines. The reverse is also true. In 1894, following the panic of 1893, the percentage of loans to deposits fell to 80% and

the percentage of specie to loans rose to 30%; but no bull market occurred. This was due to stagnation in all lines of business, a period of timidity and conservatism. In 1895, there were signs of a great improvement and the stock market started upward. This improvement, however, proved illusory and premature. Loans rose quickly to 95% of deposits and specie fell below 15% of loans. Then followed, in 1896, the new record of low prices.

In studying the bank statement for its effects on speculative prices, surplus reserves will frequently suggest danger or safety. If surplus reserves dwindle too near the vanishing point, the possibility of necessary retiring of call loans is apparent. (See "Bank Statement," page 125).

It is possible to gain valuable knowledge by a careful examination of the bank statement. The points made above are, of course, only of a simple and elemental character. We may go on with our examination as far as we like and scrutinize not only totals, but the position of individual banks.. Also, in order to gain a comprehensive perspective, it will be expedient to examine, not only the barometer of the New York situation, but the condition of interior banks. However, it is a pretty good idea to begin with the A, B, C's.

High rates for call money and the calling of

loans are responsible for many sharp market movements. A large class of speculators figure that when dividend returns are high and call money cheap and plentiful, they have a tangible influence working in their favor while they are long of stocks. If rates for call money are 2% and a stock returns 6% there is, eliminating speculation, an advantage of 4% per annum in favor of the marginal speculator. This advantage is not so great in carrying stocks on time loans, as rates for fixed periods are materially higher. There is always danger of a flurry in call money, however, and in the event of a wholesale calling of loans there arises the necessity of selling stocks, and a decline occurs. There is also present the element of manipulation in this quarter, and it cannot be gainsaid that many instances have occurred where funds have been suddenly withdrawn for the purpose of "shaking out" an undesirable following or of accumulating securities to advantage; and on the other hand, call money has frequently been made cheap in order to encourage purchases.

There are two periods of the year when the stock market is affected by disbursements of money in the form of interest and dividends. The two dates at which heavy disbursements occur, are January 1st and July 1st. It is a popular belief that just prior to each of these

dates, money will grow "tight" because of the necessary provisions made by banks and other corporations to meet such payments. Following the actual distribution of funds, it is the theory that a part of this money will seek reinvestment in bonds and shares. A great many speculators argue that this would naturally produce stringency, the possible calling of loans, and consequently lower security prices in the latter half of December and June and an advance early in January and July. While this reasoning looks sound enough on its face, it is not at all dependable. It is certain that everything is discounted in advance of actual events in speculative circles, and the more widely such theories as the one mentioned are disseminated, the more dangerous and inoperative they become. Instances are not lacking in recent years, where the technical situation growing out of this reasoning, has not only nullified the theoretical action, but has resulted in actual reversal, i.e.: an advance just preceding disbursements and a decline at the time the distributed funds were presumably returning to investment channels. Numerous shrewd people, anticipating an advance in January and July, have attempted to take time by the forelock by effecting purchases in December and June. Their buying, being of a competitive character, not only carries prices upward

prematurely, but creates a weak speculative long interest, subject to disappointment if funds do not reappear in the volume expected, or susceptible to attack by great manipulators.

There is another objection to this theory of periodicity. If the market is dull and stagnant, with little public interest, it behooves the large interests which have stocks for sale to bid up prices and create activity prior to the heavy distributions of funds. They may accomplish two things by this process. They make not only a higher level of prices at which to sell their wares, but create what is of even greater importance, an appearance of activity, prosperity and a newspaper market. It is strangely illogical, but unquestionably true, that people who would flatly refuse to enter a market at a low level of prices will rush in to buy ten points higher if the factors of bustle and excitement are present. Both the doctrine of common-sense and the calculus of probabilities would establish the fact that each advance brings us nearer the top, and each decline brings us nearer the bottom; but few men can train themselves away from the idea that an upturn already established does not indicate higher prices and vice versa. It is a sort of enthusiasm which a minority understand, however, and make good use of. The psychological effect of mere excitement is one of the

explanations of the incontrovertible fact that the public usually buys at high prices and sells at low prices.

The acceptance of certain periods or seasons as a guide to either purchases or sales of stocks is, in the last analysis, merely a form of chart-playing. It is natural to evade a studious examination of the general business and monetary situation and to resort to a simple, albeit a superficial diagnosis, which, being insufficient and incomplete, is dangerous. It is suggested that while the double effects of contraction prior to distribution should be understood and examined, the only safe method is to go behind these temporary and periodical changes and study the whole basic structure comprehensively. We may find that money is in demand for the purpose of propping and sustaining an unsound business condition, and that it will in all probability fail to return in volume to the security markets. This occurred in January, 1907, and the believers in a "January rise," were badly disappointed. Interest rates on money must also be given consideration. If the commercial world is striving to secure funds at a higher rate of interest than is offered on shares, money, or a good portion of it, will go where interest returns are greatest. And in this regard it may be said, that merely local interest rates are not always a

good indication of money affairs in the business world. Not long ago, the writer, being suspicious of the claims of plentiful money and low rates in New York, investigated the matter through Western bankers and found that prime paper was being offered west of the Missouri River at much higher rates. This was made particularly significant by the fact that previously the borrowers had always been able to supply their needs at home, and that the loans, being offered through brokers, really cost about ½% more than was apparent on their face.

It is frequently interesting and instructive to examine the character of collateral behind loans, and find out how large a percentage of this collateral consists of stocks and like securities. Our stock market might appear to be in a sold out condition, when, in reality, a very bad technical condition obtained. The purely marginal speculative account in New York City, or other important centers, is carried on under certain flexible rules or customs as to the amount of money loaned on certificates; but in cases where securities have been widely purchased for cash by small holders, and, in the event of general tightness in money or depression in business, made the basis of loans in country banks, but we have, in fact, a very weak marginal public account. The home

banker will loan more liberally to his townsmen and will scrutinize the movements of prices or the stages of the market less closely than the city banker, and the certificates owned by small holders and deposited as collateral may, in the aggregate, represent an enormous line of shares. It would be quibbling to say that this situation represented anything less serious than a weakly margined public line. If the market declined materially, the bankers would be forced, in self-protection, to call for more collateral, and the result would depend, as in all other cases, on the ability of the individual holder to take care of himself. Such a condition existed in U. S. Steel stocks in the depression of 1903, and was pointed out at the time by the writer. The knowledge obtained was based barometrically on information obtained from a number of bankers in different localities.

While interest rates for both time and call money are frequently fictitious, or of a temporary and artificial nature, and no set rules can be laid down as to certain conditions in money and their immediate effects upon security values, it is not difficult to gain a general idea of underlying conditions. We have always at hand statistics which will reflect faithfully the fundamental basis of the entire world structure. But in this important division, as in most

other branches of speculation, we often find that what is really important is absolutely ignored, while matters of little moment are harped upon, or even made the basis of operations. Thus, every habitue of brokerage offices eagerly watches the bank statement or the rates on call money, and knows nothing about the expansion of credits, even when such expansion has reached a point that would make a crisis appear inevitable. No better proof of this can be offered than the fact that our heaviest business and greatest inflation, have frequently gone merrily forward for a year or more under suicidal conditions. These conditions have sometimes been so obvious, so forcible, that it would appear impossible to view them with equanimity. In a majority of cases they were probably not viewed at all, and the thoughtful men who pointed out the danger have been called calamity howlers or pessimists. There is one great check to education in this direction: great financiers who are most conversant with actual conditions, seldom find it expedient to point out the facts. Sometimes they, themselves, wish to dispose of their holdings because of the obvious peril ahead and this process would not be facilitated by gloomy predictions. On the other hand, it is too often the case that these same gentlemen, finding it to their great advantage to dis-

perse sunshine until their goods are sold, point assiduously to the excellent business of the present, and neglect to touch on the irrepressible future, which, after all, is the most important question to the investor or speculator.

V

Political Influences, Crops, Etc.

The possibility of legislation adverse to corporations is always present as a market factor, and at times severe declines have been recorded through such action. It is not always the case that such legislation is truly a bear factor, although it is fashionable to so interpret anything in the nature of legislative interference with corporate affairs. It is the writer's opinion that a great deal of misunderstanding has recently arisen in regard to the attitude of certain party leaders toward the heads of great railroad corporations. The opinion has been widely fostered by opposing politicians and others that the credit of railroad corporations was being badly impaired, and the interests of stockholders jeopardized because investigations were ordered as to the methods of individuals or directorates.

It does not appear that any reasonable man could, as the stockholder of a corporation, or as a private citizen, object to having dishonest or sharp practices on the part of the active

management of the property in question exposed and prevented. Where it is shown that an individual, in his capacity as the head of a business, has employed his office as a means of juggling stocks or reaping enormous personal gains, it cannot but be to the interest of stockholders to have such practices stopped. If the means at issue are honest and legitimate, the benefits reaped should go to the stockholders. It is impossible to reconcile any other plan with equity and common honesty. Let us look at the matter without the mystery that obscures the affairs of a great corporation.

Suppose a member of a certain firm, its manager, finding the firm in need of funds, secures money at a high rate, and at great profit to himself—is that right? Or is it the manager's business to work entirely in the interest of the partners he represents? Is it possible for him to legitimately acquire personal profit of any kind in administering the affairs of the firm? It is not sufficient to point out that the manager's action in securing funds redounded to the great benefit of the business concern, or that his capability and shrewdness were reflected in enormous partnership profits. His associates in business are entitled to all, not a portion, of the gains secured in the management of its affairs.

It is submitted that much of our recent leg-

islation which is popularly supposed to have injured stock values has, in reality, aimed to protect the small holder and throttle the unscrupulous men who, while actually in their employ, were milking their business of millions. Legislation which effects publicity and simplicity in the affairs of corporations is an unmixed benefit to the small investors.

It is almost invariably the case that when a great decline in stock prices occurs, the setback is popularly attributed to some factor which, in reality, had little to do with the reversal. In the decline of 1907, thousands of people attributed the inability of railroads to borrow money at low rates of interest almost entirely to hostile legislation. Apparently these rapid-fire thinkers did not know or realize that interest rates had risen the world over, that there was not a free money market in the world, and that money, instead of being withheld from 4% issues, was fully employed in other lines. Such, however, was the case; British Consols, French Rentes,—all the choice securities of civilized countries had kept pace with the declines in our own bonds and stocks; but these facts seem to be unappreciated.

It is true that adverse legislation sometimes seriously impairs the value of a security. A public utilities company, for example, which is forced to reduce its selling rate, is unques-

tionably injured from an investment point of view. Such legislation, however, may be weighed correctly by a little calm consideration, and it may be said that action of this nature is usually for the purpose of correcting abuses, rather than as a revengeful and confiscatory attack on vested interests. Measures which prevent a fair return on capital will perish of their own iniquity. So far as measures which are formed to prevent extortion are concerned, it is impossible to criticize them.

In order to correctly weigh the effects of legislative measures on security values and prices, we must therefore examine fairly what the legislation seeks to accomplish, taking care not to allow a contemporaneous price movement which may be due to other causes, to act as a verification of a false view. This error occurs very frequently; in fact, one of the most remarkable things about speculation is that the true causes of great movements are fully appreciated by the majority only in retrospect.

The probable market effect of legislative and political affairs can be correctly gauged only by examining the nature and importance of the issue in question. This is true not only of state and municipal action, but in regard to presidential elections. There is a popular idea that it is dangerous to buy stocks on the eve of a new presidential campaign, but there is

not much in history to uphold the view. True, in a majority of cases, a decline has preceded such a contest, but there have been frequent reversals of this action, and we have had too few elections to attempt any chart-playing on this influence. Such a guide would be empirical.

The issues involved in a presidential contest, however, may sometimes influence prices. Here again a careful examination of facts and probabilities will generally uncover the truth. If the nominee of one party stands on a dangerous platform and the outcome of the contest is in doubt, we may well dispose of shares if for no better reason than that the element of danger is present. Danger, whether or not it is finally realized, is a bear factor, just as safety is a bull factor.

Tariff agitation should be accorded careful consideration by the speculator. This is particularly true as regards the effect on industrial corporations. A reduction of the present tariff on Iron and Steel, for instance, would materially lower, if not destroy, the value of many of the common stocks of steel manufacturing corporations. A very clear and comprehensive work on this subject is mentioned in the bibliography on page 183.

No cut and dried rules or suggestions can be offered as to the effects of political or legisla-

tive issues on prices. Each point must be scrutinized as it arises, and judgment formed thereon. Sympathetic movements will sometimes occur because of apprehension or misunderstanding, but such effects will be short-lived.

Crops and Crop Failures.

The question of crop failures is of great importance. It is not difficult to form a fairly correct idea as to the ultimate yield. The estimates of the Government sometimes go wide of the mark, but it must be remembered that they are estimates and nothing more, and that conditions may change somewhat after the figures are compiled. The speculator is frequently confused by the conflicting opinions of private experts. It is probably safer to disregard the various authorities and pin one's faith to the computations of the bureau at Washington. These official documents have been criticized at times, and no doubt the criticism has been warranted, but they form our most dependable source of information and will improve as time rolls on.

A crop failure, or a short crop, invariably brings forth much fallacious vaporing from the rooters of Wall Street. They are as bad in their efforts to obscure the truth as are the crop-killers with their fabrications. A crop

failure is a serious thing and must be faced as such. The contention which is always heard in lean seasons, that the evil has been counteracted because of the large reserves of Wheat, Corn or Cotton in farmers' hands is ridiculous. Farm reserves are wealth. They have already found their place in the business structure. In many cases the money they represent has already been spent in the form of credits. Nor do high prices for cereals or cotton overcome the evils of short production. Small crops mean decreased employment for laborers; a diminution of per capita purchasing power, and increased cost of living. They also mean smaller tonnage for the railroads, and consequently decreased earnings.

And in examining crop prospects, we should consider the fact that each year's normal crop should be larger than the one preceding it. This is distinctly shown by tracing production back for a term of years.

There will, of course, be fluctuations in this gradual increase, but the tendency is certain. We may also consider that as railroads are constantly extending their lines and increasing their facilities, it follows that increased production in the commodities they transport is necessary to their well being.

And short crops the world over in the same year have the same elements of economic evil.

The purchasing power of the world is reduced, and even if we ourselves make fair crops and export them at high prices, the world's poverty is felt in lack of demand for other exportable surplus. The civilized world is too closely knit together in its affairs to permit of the entire localization of the effects of a serious property loss.

A lean crop year can probably do more to temporarily injure the actual value of railroad shares than can any other single influence bearing on prices. Tonnage is affected both ways, so is passenger traffic. There is less grain or cotton to haul to the markets, and, as purchasing power has been reduced in the affected localities, there is less freight to haul back to the producers. In the last analysis, the products of a community represent to a great extent the mere exchange of these products for other luxuries and necessities, and the effect of decreased production is a two-edged sword, so far as the transporting companies are concerned.

Accidents.

The effect of accidents on stock prices has been fully discussed in a former work, and the contention offered that accidents could no more be provided against, or considered, in the investment or speculative world than in

any other walk of life. It is also thought that accidents are more frequently the excuse for movements than the cause of them. If a market is in a bad technical or general condition, the slightest adverse happening may create panic; while if the foundation is sound, even a great calamity, such as the San Francisco earthquake, will cause only a temporary halt. The man who speculates correctly has little to fear from accidents.

In the following section of this work, the writer has undertaken to touch on such features as appear of most interest and benefit to the speculator or investor. Some of the matter presented, such as the question of dividend dates, will appear to many readers so simple as to be unnecessary, but it is true, nevertheless, that many very elementary facts are misunderstood or unappreciated by a large class of public participators.

VI

Puts and Calls

Puts and Calls, or "privileges," have long been popular with a certain trading element, either as a protection against loss in commitments already made, or as a positive method of trading.

The theory and operation of privileges may be easily understood by considering them in the light of insurance, the money paid for them as a premium, and the funds received in case the privilege is exercised, as a loss paid by the insurance company. It will be understood, that in speaking of the seller of puts or calls, the insurance company is referred to, and that the buyer represents the insured party.

The buyer of a call has the right to call for his shares or commodity, at the price named in the contract at any time before its maturity. The seller of a call fixes a certain price at which he agrees to deliver stock, specifies the duration or time limit of the contract, and receives from the buyer a certain sum or premium.

For example: United States Steel Common

is selling at $40 per share; A, the seller, offers a call on $100 shares at 43, good for ten days, at a price of say, $100. B, the purchaser, pays the $100 and receives a contract from A as specified above. Now suppose that at any time before the expiration of the period named, Steel Common advances to 50. B can call for the delivery of 100 shares of Steel at 43, and by selling it, reaps a profit of $700, less the cost of the privilege, ($100), and the brokerage. Used as a protective measure on short sales, the result would be the same, as $700 would have been saved. That is to say, if A is short of Steel at 40 and it advances to 50, his call has acted as insurance against any loss over and above the $300 represented by the rise from 40 to 43.

The "put" is exactly the reverse of the "call," and is insurance against a decline; or, in other words, an agreement to receive shares at a specified price on or before a certain date.

Using the same illustration as before, let us assume that the price of Steel Common is 40, and that A, the seller, offers a put at 37, good for 10 days, at a price of $100. B, the buyer, is now insured against any loss which may accrue through a decline below 37 in the ensuing ten days. If he is long of the stock and it declines to 30, he may deliver his shares to A at 37, or if he has purchased the "put" as a

speculation, he may buy 100 shares in the market at 30 and deliver to B at 37, netting a profit of $700, less the price paid for "put" and brokerage.

One of the favorite methods of trading in privileges is to buy or sell against them when the price named is reached. For example, say B holds a ten day "put" on Steel Common at 37, and the market for the stock declines to 36 in five days. He may now buy 100 shares at 36 on the theory that he has regained his original outlay of $100 and has a possibility of profit through market action in the remaining five days, while there is no possibility of loss. If the market advances to, say 38, he may sell the one hundred shares purchased, and on another decline to 37 or 36 may again purchase, repeating the operation indefinitely during the life of his put. The "Call" is, of course, made the basis of short sales on an exact reversal of this process. This fashionable form of exercising privileges is facilitated by the fact that "puts and calls" issued by members of the New York Stock Exchange, are generally accepted by brokers as "margins"; B having paid A $100 for a "put," as illustrated above, could, if Steel declined to 37 or below that figure, buy 100 Steel and give his broker the privilege issued by A, in lieu of a marginal deposit. The broker is satisfied, as he gains a commission, and in

the event of a further decline in the price of Steel can call on A to receive the stock at 37 when the option expires.

Another popular form of trading in privileges is to buy or sell half the amount named in the privilege when it becomes "good" through market action. If B holds a "put" on 100 Steel at 37, he may, at that price or below, buy 50 shares. He is now in a position to profit by either an advance or a decline. If the price advances to 40 he has three points profit in the 50 shares purchased. If, on the other hand, the market declines to 34, he still gains 3 points on 50 shares, for his "put" protects him against a loss in the 50 shares purchased and he can purchase another 50 shares at 34 and deliver to A at 37. In short, when he makes his 50 share purchase at 37, he is both short and long of the stock and must gain on a movement either way in the market price.

A "Straddle," as the term is applied to privileges, is a combined "put and call'.' The purchaser gains on a movement in either direction. The general rule is that the gain is to be represented by a market change representing an excess of the amount paid for the 'Straddle." Thus if A sells to B for $250, a straddle on 100 shares of Steel, when the current market for the stock is 40, B is in a position to gain by

either an advance above 42½ or a decline below 37½.

The purchasers of privileges are sometimes perplexed by market changes which are brought about by dividend payments. The rule is that the dividend always goes with the stock. The simplest way to arrive at correct figures is, to mentally lower the price of either the "put" or "call," by the exact amount of the dividend payment. Thus, if B holds a "call" on Steel at 43 and a dividend of 2% is paid on the stock during the life of his option, his "call" becomes operative at 41 as the dividend goes to him. If he holds a "put" at 37, and 2% dividend is paid on the stock, his "put" is not operative until 35 is reached, as the dividend goes to the maker of the "put."

Privileges in grain or other commodities are based on the same general rules and principles as those on stocks. These privileges are heavily dealt in on wheat and corn in Chicago. They are designated, however, as "ups" and "downs" in order to evade local laws prohibiting transactions in 'puts and calls." The "ups" are calls; the "downs" are puts. Most of the grain privileges handled in Chicago, or based on Chicago prices, are of a day to day character, insuring only for the next day's price changes. The ordinary charge is $1 per thousand bushels. For $1, therefore, the small

gambler, or speculator, may purchase, say a call on 1,000 bushels of wheat at 90½ when the last price recorded was 90. If wheat reaches 91½ during the next day's session, he has a gain of $10 less the cost of the "call" and brokerage.

The small capital required for this form of trading, the fact that loss is limited to the original cost of the privilege, and the great possibilities in case of extreme movements, make "puts and calls" very popular. It may be said, however, that they are, as a rule, poor property. The writer kept account of the transactions in "puts and calls" handled through a large concern for almost two years and found that only about 35% of the money paid for these privileges returned to the purchasers. That is to say, the profit shown to purchasers of "puts," "calls," and "straddles," was only about $350 out of each $1,000 received by the sellers. After deducting the item of commission charges, it was found that the sellers of privileges reaped over 50% profit each year. The experiment referred to was based on grain privileges, but would probably hold good in stocks. The sellers of these "puts and calls" are among the brightest men in the street, and when they make prices they do so on the absolute basis that they have the best of the bargain and the buyers are usually a public ele-

ment. In the test referred to, there were never three consecutive days when either "puts" or "calls" were good. There was on one occasion in the period consulted, an advance of over 20 cents a bushel in wheat in three days, but "calls" were good only on the first day of the advance. On this occasion the "calls" were good for about 2 cents per bushel on the first day's rise, but the sellers offered nothing for the second day, except at prices far above the market, and although the market advanced 6 cents per bushel, wheat was not "called." On the third day, prices for "calls" were prohibitive, ranging from ten to twenty cents above the closing price and again wheat was not called, although the market advanced 8½ cents.

In the accounts examined, one seller of privileges on wheat had an open order to sell 100 puts and 100 calls every day at the ruling price. He thus received $200 daily and invariably "took his loss" whenever the privileges operated against him. That is to say, if wheat closed one cent per bushel above the call price, he would be called for 100,000 bushels on his privileges, making him short that amount of wheat. This he bought in at once and pocketed a loss of $1,000 less the $200 received. Although he accepted some severe losses now

and then, his account showed over $30,000 profit on a year's business.

Another account was operated on a different principle by the seller of privileges and resulted in even larger profits. This individual would sell ten "puts" and ten "calls" on wheat each day. In the event of his being called, i.e., short of the wheat, he would, on the next day sell no "calls," but 20 "puts." In the event of a decline below the "put" price, he had enough short wheat to protect ten of his "puts" and in reality automatically close out his ten thousand short, frequently at a profit. As has been stated, his profits were greater than in the first instance quoted. There was, of course, a more highly speculative element in his form of operating than in the other method, but the operator was never either long or short more than 10,000 bushels, and received about $6,000 a year or 60 cents per bushel from his privileges, in addition to the accruing of profit or the curtailing of loss by his mechanical method.

In the accounts examined the persistent purchasers of privileges all finally lost money, except in a few cases where lines acquired on "puts or calls" were carried to a successful conclusion in the course of time. That is, a purchaser of "calls," finding a profit in his privilege, would call the wheat and keep it. This, however, resolved the matter into pure

speculation, as the maximum benefits derived from this form of trading can only be correctly measured by the profit shown at the expiration of the "put" or "call." That is to say, the seller need suffer no greater loss than that shown when the contract he has given matures, and consequently the profit to the buyer cannot be greater except through speculation.

It would appear from these facts, that the purchasing of privileges is a poor business proposition, while the selling of privileges is a money making affair. This is true. We need only compare the kind of men who buy "puts and calls" and those who sell them to have this truth made apparent. The late Russell Sage was a persistent writer of these instruments and made a great deal of money by the process. The late Edward Partridge also made a good deal of money in this manner in the Chicago Wheat Market. He also used privileges to aid his manipulative campaigns. On several occasions, he sold "calls" heavily through the day, then suddenly bid wheat up just at the close of the market, effecting a closing just above the call price. The scattered purchasers would call the wheat and put Mr. Partridge short several millions at a high price, which was just what he wanted. He could not have sold as much wheat in the open market without breaking the price several

cents. On the same principle, he used sometimes to sell a great many "puts" when he wished to cover a line of short wheat and rush the price downward at the close, thus enabling him to purchase a great line without disturbing the market by bidding for it. The process only worked a few times, however. As soon as it was discovered it failed, as the call price, when reached, met with such a wave of selling that it was impossible to break through it, and the manipulator was "hoist with his own petard."

There is another drawback to the habit of buying privileges—a mental one. They are frequently made the basis of positive trading with disastrous results. The man who believes in an advance in certain shares or commodities, frequently purchases privileges instead of following out his own convictions by actual trading. Thus the man who had good reasons for expecting an advance in wheat at the time of the 20 cent advance mentioned above, and who used either "puts" or "calls" or both, as a means of operating on his opinions, would have reaped less than two cents a bushel during an advance of twenty cents. He might, of course, have called the wheat on the first day of the advance and remained long, but in that case he would merely have been speculating with equal chance of loss or profit in ensuing transactions. Aside from the initial two cent

gain, he would have been in no different position than if he had purchased and held the cereal on margin.

It is the writer's opinion, founded on the experience set forth above, that it is much better to effect transactions in the ordinary manner, than to depend on privileges. If "puts and calls" are dealt in at all, they should be sold, not purchased. The insurance companies make more money than is paid out in losses; so do the sellers of privileges. It may be well to add, however, that the man who runs an insurance company is in danger if he does not understand his business and his risks, or if he enters the field without sufficient capital to provide for possible initial losses. All this applies to the seller of privileges.

VII

The Question of Dividends

It is a certainty that the short seller of dividend-paying stocks suffers a drawback from dividends, except in the rare cases where interest is allowed on short stocks. If we sell short a 6% stock at par and at the end of a year find the stock still selling at par, we have lost 6% without adverse market action. This onus cannot be escaped by short-time commitments; it is merely a matter of degree. The chronic short-seller is swimming constantly against the current.

There is one point about dividends which is widely misunderstood by ordinary traders. It appears impossible to make a great many individuals understand that short sales may be as intelligently made the day before a stock sells "ex-dividend" as at any other time. Even when good reasons for a decline exist, traders fight shy of "swallowing the dividend," or retire commitments just before dividend payment for no other reason than that such dis-

tribution is to be made, which is, in fact, no reason at all.

The disadvantage to the seller of stocks through the earning capacity or increment is the same on the day or the week preceding a disbursement as at any other time. The earnings of the company are a steady day to day affair, and are, as they accrue, constantly considered in the price of the stock. In other words, the prices of listed shares are at all times "flat." At a point midway between two dividend days, the stock reflects in its current price half the amount of the undistributed dividend, or other increment. For example, if a certain stock sells normally at par and pays 6% per annum (3 per cent. in January and 3 per cent. in July) the price of the stock in March, eliminating speculative influences, would be 101½ and in July 103. When on July 1st, the 3 per cent. is distributed, the amount is simply taken away from the company and from the price of the stock also. It now returns to its normal price, 100, and whether it will go up or down from that point is a question for speculation. The factor which made the price 103 has been eliminated and it remains for the corporation in question to again earn 3% available for distribution before the next dividend day.

Perhaps this point may be made clearer by assuming that a certain stock is not handled

on the "flat" basis, but is dealt in "and interest" after the method sometimes employed in bond transactions. Let us again eliminate speculation and take for example a stock selling at 100 and paying 6%. Assuming that a dividend had been paid on this stock on January 1st, the purchaser of the stock on February 1st would pay 100 for his shares, and would also pay to the seller the accrued dividend for one month, or ½ of 1% which is exactly the same proposition as if the stock had been quoted flat on the Stock Exchange at 100½. On March 1st, the purchaser would pay 100 for his shares and 1% accrued dividend or 101, etc.

It appears, therefore, that the widespread idea that it is dangerous to sell a stock just before a dividend day is not sound. In fact, the whole matter may be dismissed by saying that if there was any good or logical reason for expecting a premature recovery of the price of dividend-paying shares, or an advance founded on any reason in connection with dividends other than the gradual accumulation from one date of disbursement to the next, the whole problem of making profits in Wall Street would be solved. The rule must necessarily work both ways, and if it is dangerous to sell at certain periods, it must be, in inverse ratio, safe to purchase. All we would need to do

therefore, would be to await the dates on which shares sold "ex-dividend" and make purchases. Here then, is exploited a patent way of getting the best of the market without study or effort. In truth, there is nothing whatever in the theory any more than there would be in buying Government bonds for a rise just after the interest had been paid on them. If good reasons exist for sales, they may be made as confidently at one time as another. The disadvantage of being short of dividend-paying stocks is always present, and it cannot be escaped, but the operation is a day to day affair not a matter of certain dates.

Basing Railroad Values.

"The problem of railway valuation is comparatively simple, and beyond the reach of but few. A railway is primarily a carrier, a carter, a drayman. Obviously then, in considering an investment, we shall ask, What sort of a road has it? What sort of vans, and what sort of horses? What sort of trade? A teamster doing business on a fine level macadamized road, with big, heavy vans, and heavy draft horse, can work at a profit and underbid a carrier with old vans and poor horses, working on roads of heavy grade. So, for example, a railroad, other things being equal, with a water grade like the New York Central, has a tremendous advantage over an up and down grade like that of the Erie.

The Illinois Central can do business much more cheaply than the Missouri Pacific. A road with a magnificent equipment like the Lake Shore can undercut a poorly equipped road like the Nickel Plate.

"The initial facts that we wish to know of a railway then are, What sort of a road has it, what is its traffic, does it get good rates? When we know what business it does, what its earnings are, then we shall ask, how is it capitalized, what are the fixed charges these earnings have to bear, what is there left, and what is the amount of stock which has to share the surplus? We shall ask if its earnings are stable, if the maintenance is adequate, if the policy of the road is conservative, if its management is good or bad. When we have done all this, then we shall go into the market, ask the prevalent rate of money, and by a simple rule of thumb, we shall know, in a broad way, whether the stock is cheap or dear."—From "American Railways as Investments," by Carl Snyder.

The Effects of Business Depression on Rails and Industrials.

"There is apparently a popular belief that the general market always moves together in a considerable swing, and that any advance in one set of stocks would be accompanied by a corresponding advance in others. So far as the general tone of a day's market is concerned this is true; but, nevertheless, individual stocks or groups of stocks can easily and gradually change their selling basis in a brief period of time. In 1901, for example, the industrial stocks reached their high levels, and suf-

fered a considerable decline in 1902. Meanwhile the rails were advancing. To illustrate and confirm this statement the highest prices of both Rails and Industrials in July, 1907, and July, 1902, are set forth in the following tables. There can be no unfairness in choosing this particular period. What is to be demonstrated is that it is possible for the groups to cross each other in price in a given time. The ten most active stocks have been chosen in each group as fairly representative of the entire market:

RAILROAD STOCKS.

Stock	High in July, 1901	High in July, 1902
Atchison	89⅜	95¾
B. & O.	108¾	112⅛
Can. Pac.	108½	139⅜
St. Paul	177½	189⅜
Erie	43⅝	39½
L. & N.	111	145⅛
Mo. Pac.	121⅞	119½
Penna.	151¾	161¾
Reading	47	69⅞
Union Pacific	110⅞	110⅝
Average price	102.97	118.41

INDUSTRIAL STOCKS.

Stock	High in July, 1901	High in July, 1902
Amalgamated	124½	68¾
American Smelting	58	47½
American Sugar	145⅝	134½
Anaconda	48⅞	27
Col. Fuel & Iron	116⅛	102½
National Lead	23	22½
Tenn. Coal & Iron	72½	69½
Rubber	21½	17
U. S. Steel	48⅞	41
U. S. Steel, Pfd.	99½	92⅛
Average price	75.80	62.18

"These tables show that during the fiscal year used, railroad stocks advanced an average of over 15 points, while industrials declined almost 14 points. In other words, the spread was 29 points. The man who bought rails and sold industrials would have made on the average 29 points. This exhibit entirely overthrows any argument that the market moves one way or the other homogeneously.

"There was a reason for the spread illustrated above. There always is a reason. We had big crops in 1902, which helped the railroads. The industrials, on the other hand, were busily discounting the business depression of 1903.

"Precedent shows that in a period of general depression Industrial stocks suffer about 33% more than rails. That is to say, in the high and low prices covering a long period, industrial securities should show a distinctly greater pro-rata of decline. Let me illustrate, using the stocks employed in the former table and covering the period of our last great cycle, 1901-02-03. As most of the high prices in rails were made in 1902, the highest prices of both 1901 and 1902 will be used, and the lowest of 1903:

RAILROAD STOCKS

	High in 1901–1902	Low in 1903
Atchison	96⅞	54
B. & O	118½	71⅝
Can. Pac	145¼	115⅝
St. Paul	198¾	133¼
Erie	45½	23
L. & N	159½	95
Mo. Pac	125½	85¾
Penna	170	110¾
Reading	78½	37½
Union Pac	133	65¼
Average price	127.11	79.22

INDUSTRIAL STOCKS.

	High in 1901–1902	Low in 1903
Amalgamated	130	33⅝
Am. Smelter	69	36¾
Am. Sugar	153	107⅛
Anaconda	54½	25½
Col. F. & I.	136½	24
Nat'l Lead	32	10½
Tenn. Coal & I.	76⅝	25⅛
U. S. Rubber	34	7
U. S. Steel	55	10
U. S. Steel, Pfd	101⅞	49¾
Average price	84.22	33.01

"It will be observed from the above table that Industrials declined about 51 points while rails declined about 48 points. But the decline cannot be figured in points. The higher range of railroad shares must be considered. A decline of two points in a stock selling at 100 is only equivalent to a decline of one point in a stock selling at 50. Therefore, in order to get a correct view of the matter, we must reduce the decline to percentages. On this basis, railroad stocks lost about 38% of their value, and industrial stocks lost about 60% of their value." —From Thomas Gibson's Market Letter, May 4th, 1907.

Undigested Securities.

"The new methods and the new projects are going through the test of fire today, and some of them are being consumed. The tests which weeded out the badly organized and incompetent of the early stock companies, which drove to the wall the "wildcat" banks of ante-bellum days, and which wiped out dividends and stock rights in badly managed rail-

ways, are now being applied to the new forms of organization which have been the growth of the past decade. But the stronger and better organized of these new corporations are likely to meet these trials without disaster, or to modify their methods to conform to the teachings of experience, until there remains to the financial world a valuable residuum of new methods for giving flexibility to capital and promoting its transfer promptly and efficiently from the industries where it is not needed to those where it will render its highest service."—From "Wall Street and the Country," by Chas. A. Conant.

How to Compute the Value of Rights.

"Inasmuch as the method of computing the value of rights is slightly complicated, an illustration may be given. Let us take the instance of St. Paul again, where the stockholders were allowed to subscribe to 23% of their holdings to new stock at par. The common stock was at that time selling a little below $200 per share. Let us take the round figure, and the operation is as follows:

One hundred shares at $200 per share equals	$20,000
Twenty-three shares at $100 equals	2,300
Total cost of 123 shares	$23,300

"Average cost, $181 per share.

"Deducting $181 from the market quotation leaves $19, the value of the rights on each share of St. Paul stock. As a matter of fact, the selling price was a little below $200, and the highest price of the rights fell a little below $19 per share.

"In other words the process is simply to take the number of new shares per hundred shares of the

original holding to be subscribed for, and add the value of these new shares at the subscription price to the cost of one hundred shares at the market price; then divide the total cost of both old and new shares by the total number of shares, and deduct the average price from the market quotations. This gives the selling value of the rights."—From "American Railways as Investments," by Carl Snyder.

Barometer of Averages.

"In order to facilitate the examination of properties and their comparative condition, the following table has been prepared. The figures were arrived at by averaging the operating expenses, fixed charges, margin of safety, and dividends of principal properties for the last fiscal year. The stock prices are based upon the closing figures of June 6, 1907. The margin of safety shown, is the margin over common dividends. Results were as follows:

Average operating expenses	69.01%
Average fixed charges	54.70%
Average margin of safety	5.28%
Average dividend common	6.03%
Average price of stock	1.09⅝

"As in all computations of this kind the figures are comparative and not basic. The fact that one stock is in a much better position than others does not necessarily mark that stock as a purchase, for all stocks may be too high, and underlying conditions may not warrant purchases in any quarter. Again, we must always consider the fact that important elements which cannot be tabulated in figures may be present. However, the table possesses value as a rough barometer, and after it has been

broadly applied. specific influences may be given due consideration. If, for example, we find a common stock selling well below 110, with operating expenses below 69.0: fixed charges below 54.70: margin of safety above 2.2% and the dividend rate above 6%, we have a remarkable combination of facts favoring the shares and investigation will be stimulated. The figures vary widely at times in different corporations and cannot always be considered either bullish or bearish as the good or bad features may be already discounted in the current price of the shares. It may also be found that one property is going backward gradually while another is improving its position.—From Thomas Gibson's Market Letter, June 8th. 1907.

The Best Method of Trading.

"It may appear that if the market is to sway back and forth, sales on advances, and purchases on declines would offer the maximum of opportunity to the shrewd trader. But not so. To illustrate this, a market movement from high to low prices as shown by a chart is presented on the following page.

"As simple as this illustration may appear, it is worthy of most earnest consideration. True, the upward and downward movements show opportunities on both sides, but if the purchaser makes a mistake, as all speculators will, he is hopelessly involved. If he buys at the wrong point he will never see daylight during the progress of the movement. Look at the other side of the matter. The seller cannot make a mistake. No matter at what point he sells a profit lies before him. A little reflection will

show what a tremendous difference exists here."—From Thomas Gibson's Market Letter, Feb. 2nd, 1907.

Indications of Crises.

"Preceding Indications.—This preceding period is characterized by well-defined indications, some of which develop contemporaneously, but which, so far as they are distinct in time, occur in approximately the following order:

"1—An increase in prices, first, of special commodities, then, in a less degree, of commodities generally, and later of real estate, both improved and unimproved.

"2—Increased activity of established enterprises, and the formation of many new ones, especially those which provide for increased production or improved methods, such as factories and furnaces, rail-

ways and ships, all requiring the change of circulating to fixed capital.

"3—An active demand for loans at slightly higher rates of interest.

"4—The general employment of labor at increasing or well-sustained wages.

"5—Increasing extravagance in private and public expenditure.

"6—The development of a mania for speculation, attended by dishonest methods in business and the gullibility of many investors.

"7—Lastly, a great expansion of discounts and loans, and a resulting rise in the rate of interest; also a material increase in wages, attended by frequent strikes and by difficulty in obtaining a sufficient number of laborers to meet the demand."—From "Crises and Depression," by Theodore Burton.

The Ordinary Swing of Prices During a Cycle of Speculation.

UPWARD SWING.

EXTREME HIGHEST.	A long period of backing and filling; public buying, and inside liquidation.
100	
90	Excitement and inflation 75% of general buying done here.
80	Good buying all around. Public interested.
NORMAL VALUE.	Opinions mixed. Public beginning to buy, but professionals rather bearish.
65	
45	Insiders still bidding prices up. Professionals bearish.
30	Insiders bidding for stocks, public skeptical.
20	A dull market. Insiders accept all offerings.
EXTREME LOWEST.	

DOWNWARD SWING.

EXTREME HIGHEST.	A long period of backing and filling; public getting
100	tired and insiders selling.
90	Insiders selling. Much bull talk, dividend increases, etc. Some averaging by people who loaded up at the top.
80	More bull talk. More averaging. Insiders still selling.
NORMAL VALUE	Many weak accounts forced out A temporary halt and
65	probably a big rally.
45	Insiders pretty well out. The wise speculative element consider this the bottom and load up.
30	General blueness and pessimism.
20	A dull market. Insid-
EXTREME LOWEST.	ers accept all offerings

—From Thomas Gibson's Market Letter, May 11th, 1907.

The Factor of Safety.

"There remains but one point to which, in view of the conditions roughly sketched above, the writer would call especial attention. That is, that the investor should look well, always, to the factor of safety. Before he puts his money into any road, no matter if it be on the recommendation of the greatest banker in the United States, let him consider how far that company is prepared to weather a storm. Few roads ever prospered under receivership, no matter how honest or how able. The receivership itself is a handicap. No matter how high the yield, no investor whose primary regard should

be the safety of his money will put it into a road whose fixed charges, after ample charges for maintenance, consume much more than 50% of the total net income available for interest, dividends and improvements—that is, save in exceptional cases like the New York Central—and until he has satisfied himself thoroughly that the property is sound.

"For the convenience of those not well acquainted, the following list of the principal roads is given, with the percentage of total net income consumed by fixed charges in the highly prosperous fiscal year of 1905:

TABLE OF FIXED CHARGES.

Atch., Top. & S. Fe	42%	Chi. & East. Illinois	68%
Atlantic Coast Line	57%	Chi. & N'western	39%
Baltimore & Ohio	39%	Chi., Bur. & Quincy	45%
Boston & Maine	78%	Chicago Gt. Western	67%
Canadian Pacific	33%	Chi., Mil. & St. Paul	32%
Central of Georgia	47%	C., St. P., M. & O	42%
Cen. R. R. of N. J	50%	C., C., C. & St. Louis	69%
Chesapeake & Ohio	53%	Col. & Southern	55%
Chicago & Alton	72%	Delaware & Hudson	40%
Del., Lack. & West	38%	N. Y., Chi. & St. L	41%
Denver & Rio Grande	52%	N. Y., N. H. & H	48%
Det., Tol. & Ironton	87%	N. Y., O. & Western	53%
Du., S. S. & Atlantic	115%	Norfolk & Western	37%
Erie	66%	Northern Central	28%
Gr. Rap. & Indiana	76%	Northern Pacific	29%
Grand Trunk	65%	Pennsylvania	38%
Great Northern	26%	Pitts. & Lake Erie	11%
Hocking Valley	31%	P., C., C. & St. L	54%
Illinois Central	47%	Reading	45%
Iowa Central	79%	Rock Island	83%
Kansas City South'n	54%	Rutland	69%
L. Erie & Western	69%	St. L. & S. Fran	82%
Lehigh Valley	46%	St. L. & S'western	76%
Long Island	101%	Seaboard Air Line	78%
L. S. & M. S	38%	Sou. Pacific	49%
Louis. & Nash	54%	Southern	69%
Maine Central	46%	Texas & Pacific	40%
Michigan Central	57%	Tol., St. L. & S'w'n	61%

Minn. & St. Louis	77%	Union Pacific	31%
M., St. P. & S. S. M.	44%	Vandalia	54%
M., K. & T.	75%	Wabash	80%
Missouri Pacific	60%	Wheel. & Lake Erie	90%
N. Y. C. & H. R.	64%	Wisconsin Central	69%

Importance of Fixed Charges to the Investor.

"The high degree of stability imparted to interest payments and dividends by a low percentage of fixed charges, and the high degree of instability imparted by a large percentage, is so elementary that it would seem to need no emphasis. And yet this item is habitually disregarded by perhaps 90% of bond and stock buyers. On this account it may be worth while to illustrate by simple comparison the effect of a 20% decline in gross or net earnings. We will compare the conditions of two roads whose fixed charges are respectively 75% and 25% of the total net income. The operation would be as follows:

		Suppose a 20% Decline	
Say Earnings	$1,000,000	$800,000	
Exp. (70%)	700,000	560,000	
Net	$300,000	$240,000	
If F. C. 75%=	225,000	225,000	
Surplus for div.	$75,000	$15,000	(Case I)
Decrease		80%	
If F. C. 25%=	75,000	75,000	
Surplus	$225,000	$165,000	
Decrease		26%	(Case II)

"It will be seen from the above that a 20% decline in the net earnings would, in the first instance, mean a decrease of 80% in the surplus; while in the second case, the same decline would mean a de-

crease of only 26% in the surplus—figures which sufficiently indicate what a high percentage of fixed charges means.

"In this connection it may be further noted that in the large holding companies, like the Pennsylvania, the New York Central, the Union Pacific, and others, the factor of safety and the surplus shown tends to be relatively more stable than in companies largely or exclusively dependent upon the earnings of their own roads. This is due to the general custom of American Railways of paying out in dividends only a part of the actual surplus earned. From this it results that dividends are much more stable than earnings, and that the income of the holding companies from this source will correspondingly show smaller fluctuations than earnings. When, therefore, as in the case of some of the large holding companies named, the income from investments represents a considerable portion of the total net income shown, the surplus, other things being equal, will be much more stable than in other companies.

"It is needless to add that this stability is still further heightened when, as in the case of the Pennsylvania, Union Pacific and some other roads, the percentage of fixed charges is at the same time low." —From "American Railways as Investments," by Carl Snyder.

Borrowing and Lending Stocks.

"When a speculator sells stock which he does not possess (when he sells it short) he (or what is the same thing, the broker who acts for him) has to borrow the stock to make delivery to the purchaser. The one who possesses stock (who is long of it)

is, in ordinary circumstances, as anxious to lend it as the one who has sold it short is anxious to borrow it.

"The lender of stock receives from the borrower the market value of it in money, but except when the stock is lending flat (without interest) or at a premium, the lender of the stock pays to the borrower of it interest on the money paid for the stock by the borrower. The rate of interest is determined by bid and offer.

"On the New York Stock Exchange, brokers who have stocks to borrow and brokers who have stocks to lend assemble immediately after the close of business on the exchange and those who needs stocks borrow amounts necessary to make deliveries the next day. Those who neglect to borrow at this time must do so the next morning, or some time in the day before the delivery hour, 2.15 p. m. There is no loan crowd in the morning, but borrowers seek lenders at the posts on the floor of the exchange around which the particular stocks that they require are dealt in.

"The same rules govern the receipt and delivery of stocks borrowed and loaned as govern stocks bought and sold. In returning borrowed stock the borrower must notify the lender before 1 o'clock on the day of delivery; the lender in calling or demanding the return of stock must do likewise.

"When a stock is loaned flat, the owner is relieved from the cost of carrying the stock. If loaned at a premium he is still better off, for the premium is so much gain. When a stock is loaned at a premium, the premium applies in the absence of a renewal of the loan only to the day on which the stock is loaned.

"If a stock that has been borrowed advances in

market price the lender may require the borrower to pay to him the difference between the price at which the stock was loaned and the new higher price. On the other hand, if the stock declines in price the borrower may require the lender of the stock to return to him the difference between the price at which the stock was borrowed and the new lower price. These differences are called market differences.

"When a corner is being worked up in a stock it is the practice of those engineering it freely to loan the stock in order to encourage the creation of a short interest in it. When this short interest has become large enough, or in other words, when the stock has become sufficiently oversold, a demand for the return of the stock brings the corner to a culmination.

"An apparent borrowing demand for stocks is sometimes created by the efforts of money lenders to obtain higher interest on their money than is obtainable in lending it in the money market. If the lending rate for a particular stock is, say, 6 per cent. when money is lending at 4½ per cent. in the money market the money lenders will borrow the stock in order to obtain the extra interest.

"When a seller of long stock (stock actually owned) desires to create the impression that he is selling short stock (stock not owned or possessed) he has his broker borrow stock for delivery to purchasers. Then when he has completed his sales he delivers his own stock to the ones from whom his broker borrowed.

"Also, when a seller of stock desires to conceal his identity, he has his stock transferred or made out in the name of his broker, or a clerk, or some other person previous to its delivery to purchasers.

"Arbitrage dealers often sell stock held abroad which will not be received for some time. They borrow for delivery to purchasers and when their own stock arrives they make returns to the ones from whom they borrowed.

"Corporations intending to issue new stock have been known to sell the stock in advance of its issuance and to borrow to make delivery to purchasers. Then when the new stock was issued it was used to make return to the ones from whom stock had ben borrowed."—From Smith's Financial Distionary, by Howard Irving Smith.

Scalping.

"There are many different methods and degrees of scalping. The word is supposed to express all the forms of trading between the "Chaser of eighths" and the man who operates for a profit of several points.

"Scalping operations are more common than any other form of trading. There are several reasons for this. Many people consider the market a machine, and base operations on pictures of the past, i. e., charts. These misused and mischievous instruments show so many opportunities of profit in movements both ways, that the unsophisticated trader sees what was possible, while the probable is overlooked.

"Again, the desire to scalp is helped by impatience and greed. The small trader will grow disgusted if there is the slightest delay. Dullness is unbearable to him. Also, he will frequently close good commitments merely for the sake of 'seeing the money.' I have seen many traders 'clean up,' receive a check which was of absolutely no present use to

them, gloat over it for a while, and pay another commission to replace the trades. Ridiculous, but true.

"I may say, as a general principle, that I consider scalping the poorest form of trading. It involves the continued multiplication of commissions, and constant personal attention. I know of but two men who have made any considerable amount of money by scalping methods. They are exceptionally fitted for this form of trading, and have the ability to take a small loss quickly. This is a trait which is very rare among public traders. A man will usually accept a small profit for no other reason than that it is a profit, and will sit stubbornly on a loss for no other reason than that it is a loss.

"The man who has reason to believe that a stock will advance or decline ten points, will, in nine cases out of ten, realize more profit by merely making his trade in the stock and going about his business until he considers it wise to terminate the contract. I will say decidedly that more traders will do better, make more money, and suffer less loss of time, and less annoyance by abandoning scalping tactics altogether.

"This view will no doubt cause my friends in the brokerage business much wrath and indignation. They naturally prefer to have ten commissions rather than one, and I fear that in many cases they recommend scalping tactics for no better reason than the one mentioned.

"That constant and repeated operations are disastrous, is pretty well shown by the remark of a successful 'Bucket Shop' man: 'I don't care what they do, or what the market does, if I can only keep them coming up to the order windows every few hours,'

said this gentleman. And he was right; for the ordinary scalper is no more than a gambler, basing his operations on possible variations, and paying a great percentage.

"But if one will insist on scalping, it may be well to examine the subject from the other side and see how the least of the evils may be chosen. Without recommending the practice, or qualifying the views expressed above, I will therefore give my idea of the safest methods of scalping.

"The man who attempts to operate on both sides of the market during the same period, is the most deluded individual in the speculative world. I have already stated, that I have only seen two traders out of thousands I have observed, who could do this with any degree of success. These hybrid Bull-bears are certainly not working on any definitely formed opinion of the future. They are worse off than even the traders who are unchangeably and constitutionally wedded to one side of the market the year round. These latter prejudiced and inflexible individuals will occasionally have a turn in their direction, whatever their position may be, but the Bull-bear will go from one month to another, never seeing anything more than a temporary gain.

"It is important, therefore, that the active trader should form his ideas, base his views on something, and, if he wishes to entertain himself with repeated operations, map out a plan of campaign which shall be, at least, intelligent in its original conception.

"Just how successfully the plan suggested will result, depends largely upon the alertness and understanding of the individual who engineers it. If the active participant is easily moved from his position by changes of a point or two against him; if he is

easily frightened by wild rumors and inspired talk; if he expects to gain thousands in a few days by venturing hundreds; or if he believes that he can operate in stocks so shrewdly as to guess high or low points within a dollar or two a share, he will meet with disappointment and loss. If he can overcome these drawbacks, he may do very well as an active trader, but I wish to reiterate my views that the man who takes a position on the market and retains it, will make more money than the scalper.

"As a test question, let me put this inquiry to the active traders who read this letter:

"When you have been correct on a certain movement of say ten points, and have made repeated operations, did you make any more money, or as much, as you would have realized on a single trade showing a ten point profit?"—From Thomas Gibson's Market Letter, February 14th, 1907.

Crop Damage.

As to the crops, we find many over-optimistic people trying to belittle positive crop damage. It cannot be belittled. It is dangerous and foolish to evade an issue instead of facing it. The argument that our surplus from last year will carry us through a shortage is puerile. That surplus has already been considered. Wheat in the bin is money; some of that money has already been spent and all of it has been given due consideration in the basing of our wealth. A number of writers attempt to make a probable crop of 2,500,000,000 bushels of corn a "bumper crop." Their methods of arriving at this conclusion are not sound. It is certain that we should, in the natural course of events, raise more and more wheat and corn each year as the popula-

tion of the world, and the uses of the cereals increase. To compare one year with another will not do. Particularly in Corn and Cotton must we steadily increase in acreage and production, for we supply the world with those commodities. To illustrate this point, let us go back a few years and see what has occurred.

COTTON AND CORN PRODUCTION OF THE UNITED STATES FOR TWENTY-FIVE YEARS.

Year	Bushels Corn	Bales Cotton
1880	1,717,434,543	5,789,329
1885	1,936,176,000	6,550,215
1890	1,568,874,000	8,655,000
1895	2,151,139,000	7,157,340
1900	2,105,102,516	10,383,422
1905	2,707,993,542	11,345,988
1906	2,927,416,091	13,000,000

The time is very near at hand, when anything less than 3,000,000,000 bushels of corn will be a crop failure; and high prices cannot be considered a great compensation in lean years. Short crops mean decreased demand for labor and loss of purchasing power by the common people, who are after all the best spenders.—From Thomas Gibson's Market Letter, July 13th, 1907.

The Selection of Securities.

When so many seductive baits are offered, so many nets and traps contrived and constructed by clever brains and cunning fingers are spread for the capture of those having money, is it surprising that the careless and credulous are victimized, and even that the sagacious and prudent should sometimes be taken in? Nevertheless, for the losses they have sustained, investors, as a rule, have themselves

chiefly to blame. The mistakes made, in nine cases out of ten, have been the purchase of "cheap" securities. The hope of realizing a little more than ordinary interest, by buying paper at a discount, has proved to be the rock on which unnumbered capitalists have split. In addition to their money's worth, they have endeavored to get something for nothing, with the result of most generally getting nothing for something. It is remarkable how blind are people, ordinarily sagacious enough to make money, to the fact that property cannot pay a revenue beyond its producing capacity. For instance, how can a trolley company, whose line is wholly or mainly built from the proceeds of mortgage bonds, sell them at a heavy discount, besides allowing large commissions for the selling, and then pay both this interest and dividends on a large issue of watered stocks? Or how can a poor agriculturist, occupying a half improved farm out on the frontier, with a family to support and grain selling barely above the cost of production, pay ten or twelve per cent. upon the capital with which he does business?—From "The Art of Wall Street Investing," by John Moody.

The Bank Statement.

"A statement or exhibit of the condition of banks.

"In New York the Bank Statement is issued from the clearing house on Saturday. The consolidated statement (or as it is officially designated, the "summary of the weekly statement of the associated banks") is the collective showing by the banks belonging to the clearing house—the showing when the returns of the individual banks have been consolidated (put together).

"The consolidated bank statement shows the average deposits, loans, specie, legal tenders, circulation, reserve and surplus reserve of the banks for the week ending with and including Friday.

"The term deposits includes the net deposits (credit balances) of persons and concerns (designated as individual deposits), balances to the credit of other banks and all money and credits subject to withdrawal. Loans include money loaned and likewise paper (promissory notes, drafts, etc.) bought. Specie includes not only gold and silver coins, but also gold certificates, which are redeemable in gold or silver, as the case may be. Legal tenders as the term is used in the bank statement, means, United States notes (greenbacks) and Treasury notes (notes issued for silver bullion purchased under the so-called Sherman act).

"Note.—As defined by the statutes, legal tenders include United States notes, Treasury notes, gold and silver coins and minor coins, but not gold certificates, nor silver certificates.

"Circulation means the notes issued by national banks, to secure the redemption of which Government bonds have to be purchased by the banks and deposited with the Treasurer of the United States. A bank cannot count circulation in its reserve; whether it is its own circulation or the circulation of some other bank, makes no difference. Reserve means the total amount of specie and legal tenders held. Surplus reserve means the total amount held in excess of legal requirement. A national bank (in New York City) must, by law, maintain a reserve equal to 25 per cent. of its deposits; a state bank must, by law, maintain a reserve of 15 per cent. In compiling the bank statement a reserve of 25 per

cent. is allowed or figured for state banks as well as for national banks.

"The consolidated statement formerly was issued from the clearing house in the following form, the changes (increases and decreases) resulting from comparison with the preceding statement (the statement issued the week before):

Loans.....	$874,647,900	$2,344,000 Increase
Specie.....	152,338,200	1,068,300 Increase
Legal Tenders....	67,274,300	1,319,000 Decrease
Deposits.	872,340,600	164,600 Increase
Circulation.....	36,072,500	411,600 Increase

Decrease of reserve, $291,850

"The (final) item reserve in the statement as issued from the clearing house, meant surplus reserve, although not specifically so stated.

"In the newspapers the statement appeared as follows; being elucidated so as to show the reserve held (that is, specie and legal tenders which are generally referred to as cash holdings), the reserve required and the surplus reserve with the changes in these items:

	Current Week	Preceding Week		Changes
Loans.....	$874,647,900	$872,303,700	In.	$2,344,200
Deposits....	872,340,600	872,176,000	In.	164,600
Circulation..	36,072,500	35,660,900	In.	411,400
Legal Tends.	67,274,300	68,593,300	De.	1,319,000
Specie.....	152,338,200	151,269,900	In.	1,068,300
Reserve held	$219,612,500	$219,863,200	De.	$250,700
Res. req'r'd.	218,085,150	218,044,000	In.	41,150
Surplus...	$1,527,350	$1,819,200	De.	$291,850

"In 1902 the Secretary of the Treasury (Leslie M. Shaw) suspended the requirement to keep a reserve against government funds on deposit in national banks upon the ground that these funds were special

deposits which were fully secured by pledge of bonds with the Treasurer of the United States. This action by the Secretary of the Treasury caused a change in the make-up of the bank statement by the addition to it of figures showing the average amount of government funds on deposit. The consolidated statement was thereafter issued from the clearing house in the following form:

Loans.....	$874,647,900	$2,344,200	Increase
Specie.....	152,338,200	1,068,300	Increase
Legal Tenders....	67,274,300	1,319,000	D'crease
*Deposits.....	872,340,600	164,600	Increase
Circulation.....	36,072,500	411,600	Increase
Reserve on all deposits.....		291,850	D'crease
Reserve on all deposits other than United States...		325,825	D'crease

*United States deposits included, $40,633,400.

"In the newspapers the statement was made up in both the old and the new forms as follows:

	Current Week	Preceding Week		Changes
Loans.....	$874,674,900	$872,303,700	In.	$2,344,200
Deposits....	872,340,600	872,176,000	In.	164,600
Circulation..	36,072,500	35,660,900	In.	411,400
Legal Tends.	67,274,300	68,593,300	De.	1,319,000
Specie.....	152,338,200	151,269,900	In.	1,068,300
Reserve held	$219,612,500	$219,863,200	De.	$250,700
Res. req'r'd.	218,085,150	218,044,000	In.	41,150
Surplus.....	$1,527,350	$1,819,200	De.	$291,850

Deducting the United States deposits held by the banks from the aggregate deposits the bank statement compares as follows:

	Current Week	Preceding Week	Changes
Tot. deposits	$872,340,600	$872,176,000	In. $164,600
U.S. deposits	40,633,400	40,769,300	De. 135,900
Dep's 25%..	$831,707,200	$831,406,700	In. $300,500
Reserve held	219,612,500	219,863,200	De. 250,700
Res. req'r'd.	207,926,800	207,851,675	In. 75,125
Surplus.....	$11,685,700	$12,011,525	De. $325,825

"The detailed bank statement, which is issued simultaneously with the consolidated statement, contains first the number of each bank (each bank has a number by which it is known at the clearing house) and then the name of the bank, after which follow the amounts of its capital, net profits (surplus and undivided profits), specie, legal tenders, deposits and circulation.

"The bank statement is said to have been made up on rising averages when the items in it have been increasing in amount during the week, or the statement is said to have been made up on falling averages when the items in it have been decreasing in amount during the week.

"Generally speaking, the bank statement is favorable or good when it shows that the position of the banks has been strengthened, as by an increase in the surplus reserve through, or by means of an increase in their cash holdings rather than by a decrease in their deposits, which often is effected by the calling of loans—by demanding and obtaining the payment of money loaned on call. As money loaned is credited to borrowers on their deposit accounts and increases the total deposits of the bank, so the payment of loans by borrowers takes from and decreases deposits. As will be seen, the calling and consequent payment of loans does not

increase cash holdings but merely changes balances in individual accounts. A reduction in deposits reduces the amount of cash required to be held as a legal reserve and correspondingly expands (increases) the surplus reserve. Generally speaking, also, the bank statement is unfavorable or, if particularly unfavorable, is bad when the position of the banks has been weakened, as by a decrease in the surplus reserve through a decrease in their cash holdings rather than by an increase in their deposits, which often is effected by an expansion in (increase in amount of) their loans, which correspondingly expands (increases) their deposits and correspondingly increases the amount of cash required to be held as a legal reserve. This additional amount is deducted from and correspondingly reduces the surplus reserve.

"The bank statement may be said to be favorable or good, however, if an increase in loans is reported when the banks are surfeited with money: also the bank statement may be said to be unfavorable or rather not good (but hardly bad) when it shows that money is accumulating in idleness in the banks —when deposits are increasing, not as a result of increasing loans, but in the absence of a borrowing demand for money.

"There are other circumstances which make the bank statement favorable or unfavorable as disclosed in the circumstances themselves.

"There is also a non-member bank statement, which is a statement of the conditions of banks which are not members of the clearing house but clear through members. This statement is issued from the clearing house on Monday and shows the average condition of the banks for the week ending with and including the preceding Friday.

"The non-member bank statement contains the name of each bank, followed by its capital, net profits, average amount of loans and discounts and investments, average amount of specie, average amount of legal tender notes and (national) bank notes, average amount on deposit with its clearing house agent (the bank through which it clears at the clearing house), average amount on deposit with other New York City banks and trust companies, average amount of net deposits and average amount of circulation."—From Smith's Financial Dictionary.

The Cycles of Stock Speculation.*

All speculators, and most investors, possess a general idea of the range and trend of prices for a considerable period. This knowledge is more frequently based upon impressions gained during their own years of activity in the speculative world than upon research. The knowledge gained by active participation is certainly the most forcible and lasting, but is frequently productive of erroneous ideas, as will be set forth hereafter.

For the purpose of giving a clear idea of the movements in stocks during recent years, the accompanying chart has been arranged. The use of circles in lieu of the customary straight lines was hit upon as presenting more clearly to the eye the comparative extent of each year's movement, and more plainly distinguishing one year from another. These advantages are gained without obscuring from view the general trend of prices for the period considered.

For the purpose of establishing a single hypothetical stock whose movements should be representative of the course of all other ac-

*Reprinted from MOODY'S MAGAZINE of August 1906.

tive securities, the fluctuations of twenty stocks were welded together. That is to say, the high points of these stocks for the year 1896 were added and divided by 20. The same course was followed with the low points, and each year considered was treated in like manner. By drawing a circle upon a numbered chart with the upper rim resting upon the figures representing the high point, and the lower rim upon those representing the low point, an average price for the year is necessarily established at the axis.

The size of the circles shows the actual and comparative extent of the movements, and the position of consecutive years on the diagram shows the general trend of prices.

In selecting the twenty stocks to be used in forming a composite security, care was taken to eliminate the shares of such corporations as have undergone radical changes during the period considered, 1896 to 1905, inclusive. The Rock Island Company, for example, is in itself an important system, but owing to the conversion of $75,000,000 Common stock into $200,000,000 of mixed securities in 1902, the tracing of its subsequent movements would involve unnecessary computations and explanations. It may be added that experimental tests show that the hypothetical stock, call it

"Composite Common" for the sake of convenient reference, was faithfully representative of almost all movements from 1896 to 1906, and that the selection of other stocks would have made only insignificant variations in the general result. The original intention was to extend the investigation for a longer period than ten years, but so many readjustments, assessments, and other changes occurred in listed securities prior to 1896 as to make a clear showing difficult.

Common stocks of railroads only were considered. Few Industrials have reached their tenth birthday, and aside from this, their introduction would make a false showing by increasing the dividend rate with no corresponding increase in the selling price of the stock.

The twenty stocks chosen for amalgamation were as follows:

Atchison, Topeka & Santa Fe, Baltimore and Ohio, Canadian Pacific, Canada Southern, Chesapeake & Ohio, Chicago & Great Western, Chicago, Milwaukee & St. Paul, Chicago & Northwestern, Chicago, St. Paul, Minneapolis & Omaha, Erie, Illinois Central, Louisville & Nashville, Missouri Pacific, New York Central & Hudson River RR., Pennsylvania, Reading, Southern Pacific, Southern Railway, Union Pacific, and Wabash RR.

PRICES OF COMPOSITE BY YEARS FROM 1896 TO 1906, INCLUSIVE.

Year	High	Average	Low	Fluctuation
1896	44	37½	31	13
1897	53¼	43⅜	34½	18¾
1898	62½	53¼	44	18½
1899	72½	64¼	56	16½
1900	80½	70½	60⅜	20⅛
1901	106½	89⅜	73¼	33¼
1902	119¼	105½	91⅝	27⅝
1903	106½	89⅞	73¼	33¼
1904	105½	91	76½	29
1905	122¾	109⅝	96½	26¼
1906	125¾	111⅞	98⅛	27⅝

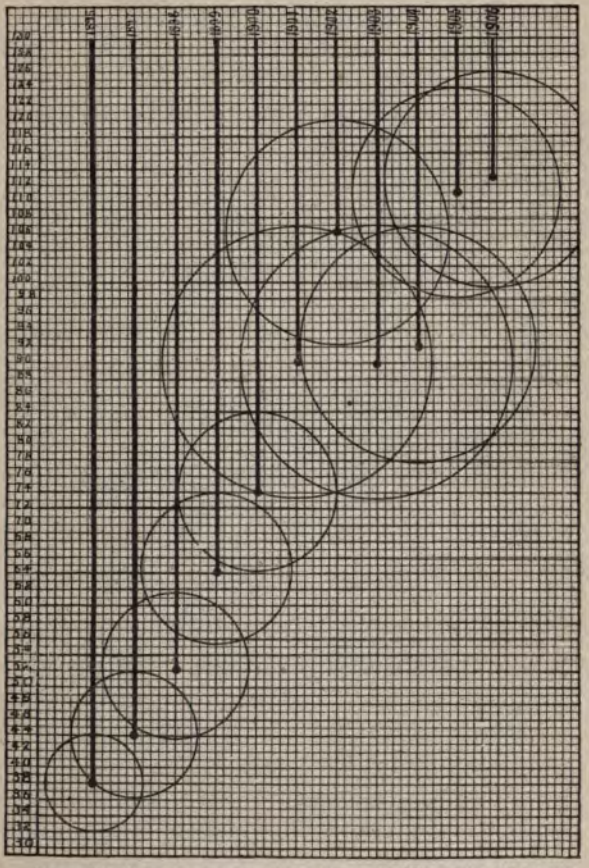
Fractions were necessarily omitted from the totals employed in charting the movements. They are, however, unimportant. Dividends on Composite Common were as follows:

1896	1⅝ %
1897	1½ %
1898	1⅝ %
1899	1 9/10 %
1900	2½ %
1901	3 %
1902	3½ %
1903	3⅜ %
1904	3 7/10 %
1905	3⅞ %
1906	4¾ %

It has been the frequent contention of the writer that a chart as a basis for speculative ventures is ridiculous, but a diagram framed for the purpose of pointing out certain facts, or inciting the student of speculative affairs to investigation of causes is a different matter. No interested person can look at the accom-

FLUCTUATIONS OF STOCKS FOR TEN YEARS.

(The rims of the circles touch the average high and low points of 20 railroad stocks, each year for 10 years.)



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panying chart without being struck at once with the decline of 1903 following the steady advance of the preceding years. If this observation incites intelligent investigations as to the reasons for the reversal, much good may result. On the other hand, the fallacy of operating on mere mechanical records of the past is shown by the same diagram. If the chart had been handed to one of the mechanical traders in 1902 he would have argued that the average price of each year marked the approximate low point of each succeeding year. It certainly does look convincing, but what follows? The infallible system not only fails to work, but reverses itself, and the average price of 1902 becomes the approximate high price of 1903 and 1904. At about the time the system player has gathered enough figures to go on, a change occurs. No intrinsic merit attaches to any kind of diagram, they being merely convenient forms for tabulating history.

Some interesting coincidences occur in the chart; most remarkable is the exactly similar size and position of the circles representing the years 1901 and 1903. In no instance did the high or low points of any integral stock correspond in these years, but the total footings were identical in each case.

The speculator may extract some value from the diagram by observing that opportunities

for profits of forty or fifty points did not occur during the entire period. The extreme possibilities in any one year were 33 points, and much less on the average. If the trader had purchased or sold Composite at an average price, his possibilities of profit would have been limited to about 15 points in any one year. This does not accord with accepted theories. The ordinary speculator who pursues his operations for ten or fifteen points successfully is almost certain to believe that much more profit lies before him, that he is only getting started. There is a reason for this; the public trader takes for his barometer some security which has been conspicuous for its extended fluctuations; he naturally notices and remembers it to the exclusion of the rank and file of stocks. For example, every active participant in speculative affairs knows that Copper had a range of 75 points in a single year, 1901. He bases possibilities too much on this sort of knowledge without reflecting that Copper was a cardinal exception, and that in order to participate in such movements he must throw caution to the winds, and deal in stocks which offer no degree of safety.

Another point established is the lapse of time required in a readjustment of values. It took Composite Common seven years to advance from an average price of 37 to an aver-

age price of 105, 68 points. This again falls short of the speculator's ideas. He expects to buy a stock at 50 today, and sell it at par six months hence, an operation which is shown by the movements of a representative stock to require a period of six years. Again his expectations are founded on exceptions. The same line of reasoning applies to one case as to the other. The speculator unconsciously magnifies everything connected with speculation.

In reviewing the movements of prices from 1896 to 1905, the most important question is, what caused the reversal of form in 1903? A complete answer to this question would be highly educational. There was no panic, nothing faintly resembling one; business suffered some stagnation, it is true; there was a falling off in the iron and steel business, but crops were good, and wheat, corn, oats, and cotton brought good prices in both 1903 and 1904. Serious business depression was more in anticipation than in realization, but 1904 witnessed no material recovery in prices. These causes do not fully explain so radical a change. If conditions had been such as to cause a reduction of dividends, or a scarcity of money in 1903, the decline would be explained, but money was plentiful enough, and dividends were unchanged. The ratio of dividends as

compared with prices was also fairly maintained from 1896 to 1902, and it would appear that prices should merely stop advancing when dividends became stationary; but prices did not merely stand still, they went materially backward.

Without pretending to enter into a full discussion of the causes for the change, one or two points may assist in forming a conclusion. The steady advance in prices from 1896 to 1902 represented two things—a recovery from the great depression of 1893, and the natural advances of property values in a prosperous and growing country. The latter point is the more important, and as there has been no cessation of the growth of population or prosperity, other causes for the reversion must be sought. It is not sufficient to merely say that the recovery over-leaped itself, for such an event would have plainly mirrored itself in a reduction in the rate of dividend returns.

Capitalization of railroads in 1903 increased about 14% as compared with an average increase of 6% in the preceding seven years. Add to this the tremendous increase in the capitalization of industrial corporations, and an over-supply of stocks appears as one of the contributary causes—undigested securities.

Dividend rates were maintained, but were not increased. This particularly affects the

simon pure speculator. Nothing will drive him into a panic quicker than a decreased dividend, and nothing makes him so sanguine of higher prices as an increase in the rate of payment. He is always basing his operations on rumors of higher dividends, and when one of these rumors fails of verification, it is almost as bad as a decrease.

And dividends did decrease in one important quarter; United States Steel, the speculative favorite, capitalized more heavily than a dozen ordinary corporations, cut its rate from 4 to 3½%, with every promise of a further reduction. This had a far reaching effect, both on speculators and small investors.

It is certain that fundamental conditions have more to do in shaping prices than has speculation, but the speculator helps, and in 1903 he was particularly potent because of the excesses engendered by the unusual speculative advances of 1901 and 1902. He helped to make the prices and he helped to break them, so he may be considered a factor in the reversal.

The small investor helped. He, too, is a dividend man; he seldom looks at earnings, improvements, or extensions—he wants dividends. United States Steel was a body blow to him; it not only affected his purse, but it frightened him.

And it is probable that an army of small investors sold their holdings for another reason —they discovered that they could make a higher rate of income in other channels. So long as both dividends and prices advanced they were satisfied. They were speculating, not investing, but you cannot convince the ordinary man that buying a stock outright, in the hope of an advance in price, is speculation pure and simple.

Much of the money diverted from the stock market in 1903 by the class last mentioned, has never returned to Wall Street. This bears out the theory that higher rates of interest are being found elsewhere. Never before has the public refused to enter the stock market during a period of great prosperity. They are absent now, and furthermore, they show no intention of returning. Possibly they are wrong. The same influences which are operating to give them better returns may be operating to greatly enhance the value of the shares they ignore,—but the small investors want dividends. Their failure to enter the stock market would seem to be strong evidence that they are finding other investment-speculations more attractive than listed shares. If this is the case, the influences leading to higher interest rates are already at work, although not clearly

discernible. Diversification of investments would tend to obscure the truth for a time.

But whatever the causes for the stock market relapse of 1903 may have been, the recovery has been complete. The average prices of 1906 were the highest on record.

Cycles of Grain Speculation.*

In examining the price movements of wheat and corn for the last ten years, a gradually advancing trend is apparent. That such would be the case was a foregone conclusion; we naturally expect to find wheat and corn in the foremost ranks of a universal movement towards higher prices. The underlying causes for this general appreciation have already been extensively and clearly discussed in Moody's Magazine.

All Prices Advancing.

The price appreciation of wheat and corn is merely confirmatory of the theory that all prices are advancing, and that they will continue to advance until the balance between gold and other commodities is readjusted.

But there is something else written between the lines of the statistics of price changes in wheat and corn. The relative advance of the two cereals is all out of proportion.

This fact leads us to seek for some specific cause operating either to depress one cereal or

*Reprinted from MOODY'S MAGAZINE of May, 1906.

enhance the other, irrespective of the influence already named.

The figures for the last ten years are as follows:

WHEAT.

Year	High	Average	Low
1896	94⅜	73 11-16	53
1897	109	86 9-16	64⅛
1898	185	123½	62
1899	79½	71¾	64
1900	87½	74½	61½
1901	79½	71 5-16	63⅛
1902	95	81¼	67½
1903	93	81¾	70¼
1904	122	101 10-16	81¼
1905	124	100 15-16	77⅞
1906	94⅜	81⅛	69⅛

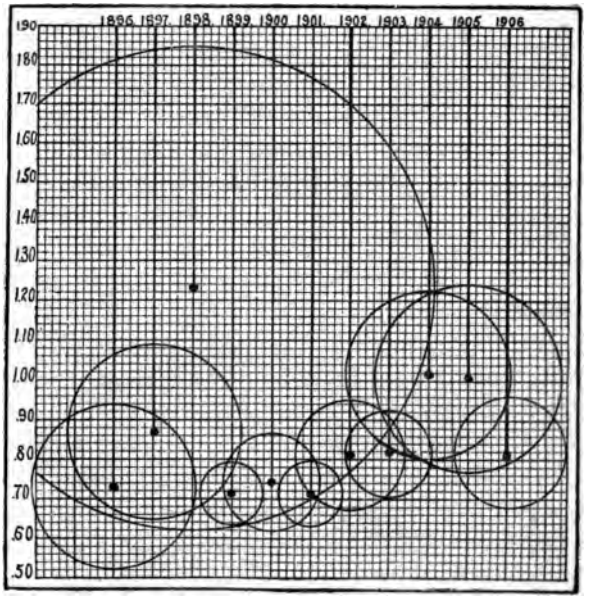
CORN.

Year	High	Average	Low
1896	30⅝	25 1-16	19½
1897	32⅝	27 9-16	21¾
1898	38	32	26
1899	38⅛	34 1-16	30
1900	49½	40	30½
1901	67½	51¾	36
1902	88	65⅞	43¾
1903	53	47	41
1904	58⅛	50 7-16	42¾
1905	64½	53¼	42
1906	54¾	46¾	39

The average price of wheat in the first year (1896) was 73 11-16, in the two following years very high prices were established, and the average may be considered abnormal, as the years 1897 and 1898 cover the rise and fall of Joseph Leiter.

FLUCTUATIONS OF WHEAT PRICES FOR TEN YEARS.

(The rims of the circles touch the high and low prices of wheat each year for 10 years.)



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To digress for a moment, it may be interesting to note that efforts to carry prices beyond reasonable limits almost invariably result in disaster to the promoters, no matter how far they may be successful in establishing blackboard quotations. With the exception of "Old Hutch" wheat corner in 1888, all the numerous attempts to speculate successfully on wholly artificial prices in commodities, have failed. The Sully cotton campaign, the Leiter wheat deal, the Phillips corn deal, the Coster-Martin corn deal, all ended in ruin for their sponsors.

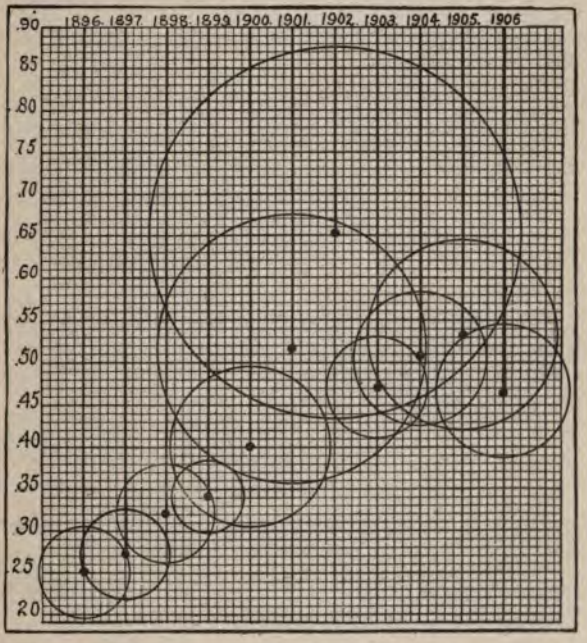
From 1899 to 1901 inclusive, the average price of wheat was a little above 70 cents, in 1902 and 1903 it rose to 80 cents, and in 1904 and 1905 to $1.00.

In the latter years, allowance must again be made for unusual influences, the Russo-Japanese war naturally helping wheat prices; making due allowance for this, it may be fairly considered that wheat has in the last ten years increased its average selling price from about 70 cents to 90 cents, or approximately 30%.

Why Corn Has Risen More Than Wheat.

Corn prices in the same period have advanced 100%; the comparatively large number of uses to which corn is put may partly account for the disproportionate enhancement of

FLUCTUATIONS OF CORN PRICES FOR TEN YEARS.
(The rims of the circles touch the high and low prices of corn each year for 10 years.)



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its price, but the discrepancy is too great to be entirely explained away on this account. It is necessary to seek some additional and more powerful reason.

The following statistical facts will make it clear that corn and wheat are in wholly different positions.

The United States raised, in 1905, 693,000,000 bushels of wheat. The world's wheat crop in the same year was 3,275,200,000 bushels. Therefore, we raised approximately 21% of the world's wheat crop. The year 1905 is fairly indicative of the proportions for the last ten years.

The acreage of wheat in the United States in 1896 was 43,618,646; in 1905 it was 47,854,079, an increase of 38%.

The world's wheat acreage as indicated by production, is increasing at about the same rate as is the acreage of the United States.

The United States raised, in 1905, 2,708,000,000 bushels of corn. The world's corn crop was 3,396,800,000; therefore, we raised 80% of the world's corn.

The corn acreage of the United States in 1896 was 81,027,156; in 1905 it was 94,011,369, an increase of 16%. The world's corn acreage, as shown by production, did not keep pace with our own ratio of increase, but remained almost stationary.

These figures show that the world is depending on the United States for only 21% of its wheat, and that wheat acreage the world over has increased about 38% in ten years; but the world is depending on the United States for 80% of its corn, and the world's corn acreage has increased less than 16%.

In order to grasp the full significance of these figures, our practical monopoly of corn production must be appreciated. Even if we admit an equal ratio of increase in corn acreage the world over, it remains for the United States to provide 80% of the increase.

Corn Area Limited.

The probability of any considerable area of new corn land being exploited, either at home or abroad, is very small. A recent circular letter by a man prominent in the cash corn trade, states that there is not an uncultivated acre of available corn land in the United States. This is a radical statement, and does not allow for the fact that with a sufficient price stimulus, considerable wheat, or even cotton land, would be diverted to corn. But whatever allowances are made for an increased corn production, it must be admitted that the possibilities are largely confined to the United States.

Wheat acreage is not thus circumscribed; in

fact, the case is practically reversed; almost 80% of the natural increase in wheat production will come from outside our boundaries. Of the principal wheat producing countries,—France, Germany, Russia, Poland and Caucasus, Italy, Hungary, Spain, Roumania and Argentine Republic—the two first named alone fail to keep pace with the United States in ratio of increased production, and others have made up the deficit of these two laggards.

In a nutshell, the difference between the relative positions of wheat and corn is this: The world's supply of wheat will be furnished by the world, while the world's supply of corn must be furnished by the United States.

It appears, therefore, that while wheat and corn may both be expected to gradually seek a higher average price in sympathy with the general upward trend, corn is affected by a specific influence, the effects of which must be added to the homogeneous advance.

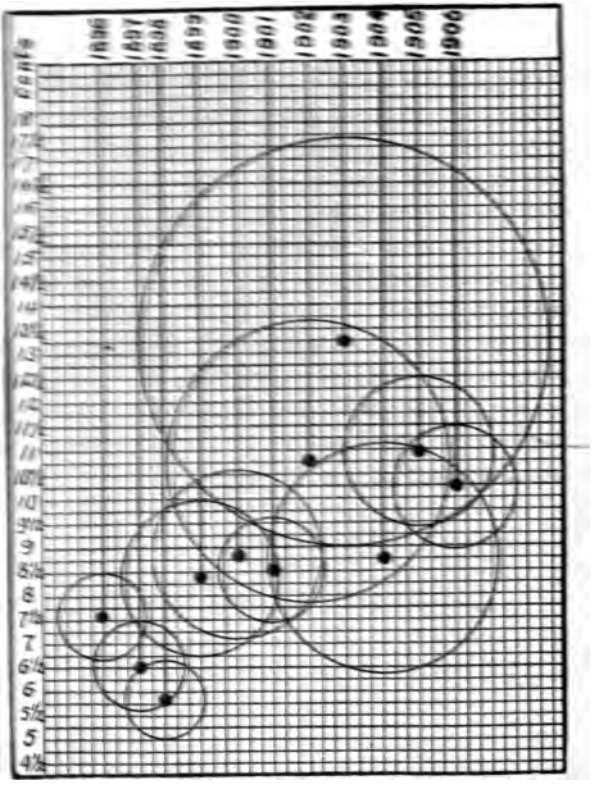
It is not possible that the supply of corn should increase as rapidly as the demand, under the circumscribed conditions herein set forth. As has already been suggested, the price of corn may become attractive enough to cause the diversion of wheat and cotton lands to corn growing. The possibilities of such a course, however, are not only limited by nature, but such action would stop itself at a

certain point by decreasing the supply of wheat or cotton, and again restoring them to favor with the planter.

The speculator may, therefore, reasonably believe that corn is destined, eventually, to reach much higher prices. He must, of course, allow for the temporary influences of large and small crops, and the numerous other actual and technical conditions which cause intermediate fluctuations, and must furthermore bear steadily in mind the fact that there is a limit beyond which the price of corn can never be sustained.

When a given commodity goes beyond a price where it can be replaced by another commodity, it has gone too far; and when necessities become luxuries, they take their places as such, and demand slackens.

FLUCTUATIONS OF COTTON PRICES FOR TEN YEARS.
The rims of the circles touch the average high and low price of cotton each year for 10 years.



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Cycles of Cotton Speculation.*

The accompanying chart, formed on the same plan as the diagram illustrating the movements of stocks in Moody's Magazine for May, develops some interesting features in the movements of Cotton for the last ten years.

For the benefit of those readers who did not follow the stock chart, it may be said that each circle represents the fluctuations for a single year. The bottom rim of the circle rests on the lowest price during the period, and the top rim on the highest price. The average price is, of course, established at the axis.

The chart illustrates speculative extremes in cotton, the figures on which it is based are not the prices of Spot cotton, but extreme high or low prices for all options. The result, however, would have been only slightly changed had Spot cotton prices been employed.

The diagram is based on fluctuations of 25 points, or 1/4 cent per pound; the prices shown, therefore, are not exact, but they serve to illustrate comparative movements with sufficient accuracy. The high and low figures are not

*Reprinted from MOODY'S MAGAZINE of June, 1906.

those of a calendar year, but of a fiscal, or crop year, ending August 31 of the years named; thus the prices for 1896 represent the fluctuations of the season 1896-1897. As production is necessarily a vital factor in making prices, this method was adopted to prevent confusion in examining the price effects of lean or abundant production. The range of prices for the period considered (1896 to 1906 inclusive), was as follows:

Season	High	Average	Low	Fluctuation
1896-97	8.50	7.59	6.69	1.81
1897-98	7.50	6.50	5.62	1.88
1898-99	6.73	5.84	4.96	1.77
1899-00	10.00	8.38	6.76	3.24
1900-01	10.60	8.80	7.01	3.59
1901-02	9.67	8.51	7.35	2.32
1902-03	13.75	10.81	7.87	5.88
1903-04	17.46	13.23	9.01	8.45
1904-05	11.15	8.77	6.39	4.76
1905-06	12.54	10.93	9.32	3.22
1906-07	11.30	9.95	8.60	2.70

In the first three years considered we find low prices, and naturally restricted speculation. The speculative price range for the entire three year period is only a shade more than 3½ cents per pound. This was occasioned by two things; first, the general depression following the panic of 1893, and second, overproduction. An examination of the prices of staples shows that unusually low figures prevailed in 1898 and 1899. Corn, for example,

averaged 27 cents in 1897, and 31½ cents in 1898. Wheat shows high average prices, but the showing is a result of fictitious speculative figures established by the Leiter deal, and cannot be considered a fair criterion. It may be added, however, that wheat sold as low as 64 cents in 1897, and 62 cents in 1898.

The question of over-production will be made apparent by reference to the following table:

Season	Crops in Bales
1896-97	8,714,000
1897-98	11,180,000
1898-99	11,235,000
1899-00	9,439,000
1900-01	10,425,000
1901-02	10,701,000
1902-03	10,758,000
1903-04	10,123,000
1904-05	13,556,000
1905-06	10,697,000
1906-07	13,000,000

Prior to 1897 no crop of over 10,000,000 bales had ever been made; the two bumper crops, 1897-98 and 1898-99 coming together, naturally brought about very low prices, particularly as they occurred in a period of general depression.

In the season next following, 1899-1900, there is a marked falling off in production, which is again reflected in a higher average price. But from that time on, we do not find prices and production in such perfect accord.

It is generally considered now that 10,500,-

000 bales is a fair crop. In the four seasons from 1900-01 to 1903-04 inclusive, we raised normal crops, while prices advanced. It would be manifestly unfair to consider the year 1903-04 as reflecting with any degree of accuracy the normal price of cotton, for in that period occurred the disastrous Sully campaign. Making due allowance for this, however, it may be assumed that prices would have advanced if no such deal had occurred. This statement is supported by the fact that the bursting of the bubble did not put prices below 9 cents at any time.

Now the most important part of the period is reached, the seasons of 1904-05 and 1905-06.

In 1904-05, in the face of an unprecedented crop of 13,600,000 bales, and in spite of the depressing influence of a speculative debauch in the previous year, the average price of cotton was 8¾ cents.

Still later, in 1905-06, a crop only a little below normal was raised and sold at an average price of 10.93.

Eliminating speculative extremes, and the temporary effects of large or small crops, it appears that the price of cotton is steadily advancing. This is the principal fact for the speculator to consider.

No one pretends to dispute the fact that the prices of all staple-food stuffs, metals and other

commodities, as well as labor, have advanced materially in the last ten years. Yet the ordinary speculator ignores this broad general principle, and seeks specific causes for the readjustment in cotton prices. And even this research is seldom conducted intelligently. The investigator attempts to explain higher cotton prices by pointing to reduction of acreage, diversification of crops and organizations formed for the purpose of withholding supplies from the market. He disregards the fact that while these influences play some small part in the matter, cotton is also seeking a higher level in common with every commodity that is bought and sold.

The contention is frequently heard that 10,500,000 bales, or even 11,000,000 bales of cotton can no longer be considered an average crop; that the supply should steadily increase in order to keep pace with consumptive demand, and that the crop of 1904-05 was therefore small, and the crop of 1903-04 not so large as it would appear. As this is the most common of the numerous explanations offered as to the recent high prices of cotton, it will be briefly discussed.

In order to arrive at a clear view of the ratio of increase in production, a considerable period must be consulted. The statistics of crops from year to year, or even from two or three

years, will not do. Let us cover a long period, jumping ten years at a time.

Season	Crops in Bales
1866-61	3,849,469
1870-71	4,352,317
1880-81	6,605,750
1890-91	8,652,597
1900-01	10,383,432

This exhibit shows that if a sufficiently long period is consulted, a steady increase in production is shown; the average production is also well maintained in the five years from 1901-02 to 1905-06, if the bumper crop of 1904-05 is distributed over the entire period.

The contention is all right, but its formulators do not take the pains to ascertain that what they claim should occur, is exactly what has occurred.

The gist of the whole matter is this: regardless of all temporary or artificial influences, some powerful force, not related to supply and demand, is shouldering prices steadily upward.

To the speculator this fact recognized, analyzed, and properly applied should be of incalculable benefit. If he understands why prices have been advancing, he will be able to determine with facility how long the influence will probably endure. Intead of being misled, or rendered over-cautious by obsolete records of the past, he will be able to calculate from these obsolete records the reasonable expec-

tations of the future. Temporary changes will, of course, be brought about by temporary causes. Fundamental values will still be influenced by supply and demand, but if an independent and submerged force is also at work, due allowance must be made for its operation.

That such a force is at work is written large between the lines of compiled statistics; to ignore its existence is an error rank with mischief. The speculator who does not consult this influence may easily make the mistake of selling at low prices because they are high by comparison with prices which obtained a few years ago.

On the other hand, a clear understanding of the matter will enable the trader to decide with more or less accuracy what now constitutes a low price for cotton, and what will be the probable price for the future.

Conclusion.

The questions most frequently asked by inexperienced people are as follows:

1—What margins are necessary to reasonable safety?

2—Is it better to study the entire list or make a specialty of one stock?

3—What class of securities is the safest?

4—What may be considered a fair rally or reaction in stock prices under ordinary circumstances?

5—What is the best general method of trading?

Some of these questions have been answered in the preceding chapters, but they will be taken up here in turn and the writer's views submitted on each head.

1—What margins are necessary to reasonable safety?

There is no unqualified answer to this question. The price of the shares operated in must be considered. All other things being equal, a stock selling at $50 would require only half the margin employed in operating in a security

selling at $100. If the $50 stock declines 25 points, it has suffered a quoted loss of half its value. The $100 stock, however, must decline 50 points to suffer an equal loss. This percentage of advance or decline is established with remarkable fidelity in every considerable movement.

If the scale order is employed as a method of accumulating shares, extraordinary marginal provisions must be made, for even as the line acquired increases, the original margin dwindles. The scale order is, or should be, based on the assumption that a temporary decline below the first purchase price is desirable and is necessary to the best results. This fact, however, should never be contorted in such a manner as to instigate purchases at high prices. If the operator who employs the scale order will try to make the first purchase at what he considers a bargain price, or in other words at what he calculates to be the very bottom of a movement, he will surely find that in nine cases out of ten, his own errors or the velocity which frequently carries prices to ridiculously low or high points will enable him to accumulate his line to advantage. The scale order should never be used on its mechanical merits alone, but merely as a method of averaging.

It goes without saying that marginal necessities will be principally gauged by the cor-

rectness of the speculator's general views. It is the writer's opinion, that if care and intelligence is used in judging values, conditions, and the stages of the market, a margin of 20% will be sufficient in almost all cases. That is to say, 20 points on a stock selling at par and 10 points on a stock selling at 50. It must be distinctly understood, however, that this opinion contemplates purchases at low prices after a decline has occurred; and when both the technical and general conditions warrant purchases.

The late Charles H. Dow fixed the sum of $2,500 as the minimum amount necessary to safe operating in ten share lots, but this sum, or any other for that matter, is an arbitrary estimate. Mr. Dow's figure was founded on the necessity of averaging and also upon a most laudable caution and conservatism which, however, might at times result in unnecessary restriction of operations at a most favorable period. There are times when $500 might be safely made the basis of trading in certain stocks; there are other times and other stocks where $2,500 would be wholly insufficient.

While no rule of thumb is possible in this regard, it is the writer's opinion that there is no necessity for being out in calculations more than 20%, provided always that due care has been exercised in basing such calculations.

2—Is it better to study the entire list or make a specialty of one security?

It is better to examine the conditions and prices of all the leading securities. This is the only method by which comparative values may be arrived at. It is frequently the case, particularly after a comprehensive decline or a panic, that certain excellent shares have suffered almost as much as the more questionable securities. At such times, what we want is not only a good bargain but the best bargain obtainable, and this may be secured more readily by a careful comparison of prices, values and income return than by any other method.

Again, in an upward movement stocks generally advance, not homogeneously, but one at a time or in closely related groups. Certain shares may have a reasonable advance while others hang fire. If we have good reason to believe we are on the eve of a great bull movement, the best results may be attained by a process of rotation in trading.

3—What class of securities is the safest?

Railroad stocks are the soundest securities. The danger of competition is not so great; the assets are more tangible and when once the specific influences which are now working against them have been cured or eliminated, as they certainly will be in time, these shares will show a steady improvement both in value

and price. At times the very best stock will suffer severely and much pessimistic talk will be heard of receiverships, etc. That is the time to buy. Lord Rothschild once advised a friend to buy French rentes. "But the streets of Paris are running with blood," replied the recipient of the advice. "That," responded Rothschild, "is the reason you can buy rentes so cheaply." The man who purchases the shares of railroads when they are greatly depressed may rest serenely in the consciousness that the future of American railroads is assured and that measures seeking to obstruct progress or prevent fair returns on investments, either in the way of income on money or the natural accretion of values cannot possibly endure.

4—What may be considered a fair rally or reaction in stock prices?

Here again the question of ruling prices of a certain stock are to be considered. Low-priced stocks always move in a narrower range than do higher priced ones. The extent of a probable comparative movement may be gauged by percentages with a fair degree of accuracy. This method of measuring a comparative advance or decline, however, will be frequently disturbed by specific influences bearing on a certain stock or group of stocks.

It is useless to undertake to establish even

a rough rule for ordinary movements by a system of averages culled from history. We find that in the course of ten years the rallies and reactions which appeared were so varied in character both as to the extent in points and the duration in days, that a barometrical average founded on such investigation would be empirical. However, the results of this inductive reasoning will be given for what they are worth.

The principal movements for ten years have been as follows:

1.—The Bull Market of 1897 to 1899.

This advance began in April, 1897, and terminated in April, 1899—two years of advancing prices. The average advance in Industrial shares was 38.79 points, or about 100%. Railroads advanced 38.92 points, or about 80%.

The intermediate reactions were as follows:

Date of Reaction	Extent in Industrials Points	Extent in Rails Points	Duration Days
Sept. 10 to Nov. 8, '97	10.17	9.78	59
Jan. 7 to Mar. 25, '98	8.67	10.43	78
Jun. 10 to Jun. 16, '98	2.84	2.93	7
Aug. 26 to Oct. 19, '98	9.41	4.41	54
Jan. 30 to Feb. 7, '99	3.07	3.38	8

2.—The Bear Market of 1899-1900.

This decline began May 1st, 1899, and culminated Sept. 24, 1900—17 months. The aver-

age gross decline in Industrial shares was 24.32 points, or about 32%, and in Rails, 13.27 points, or about 18%.

Intermediate rallies were as follows:

Date of Rally	Extent in Industrials Points	Extent in Rails Points	Duration Days
May 31 to Sep. 5, '99	10.10	8.17	97
Dec. 18, '99, to Jan. 2, '00	9.86	6.38	16
Jan. 11 to Feb. 5,'00	5.09	4.56	26
Mar. 9 to Apr. 6,'00	5.04	5.22	29
May 15 to June 1,'00	2.76	3.42	17
June 23 to July23,'00	5.34	4.56	31
July 31 to Aug. 15..	2.10	2.31	16

3.—The Bull Market of 1901.

The advance began Oct. 1, 1900, and culminated Aug. 26, 1901, 11 months. The average advance in Industrial shares was 20.87 points, or about 39%. The average advance in Rails was 37.92 points, or about 51%.

Intermediate reactions were as follows:

Date of Reaction	Extent in Industrials Points	Extent in Rails Points	Duration Days
Nov. 20 to Dec. 8, '00	5.09	1.67	19
Dec. 27, '00, to Jan. 19, '01	6.29	4.39	24
May 1 to May 9....	7.55	14.49	9
June 17 to July 15..	8.80	11.30	29
July 29 to Aug 6....	3.89	6.64	9

4.—The Movement of 1902.

The year 1902 is particularly interesting, as it shows what occurred in the market the year prior to a period of industrial relaxation. This year cannot be called either a bull or bear year, as while railroad stocks advanced and closed the year with net gains, the Industrial stocks suffered material declines. As the declines in Industrial stocks was greater than the advance in Rails, we will arbitrarily designate the year as a bear period and examine the homogeneous movement for rallies, instead of reactions.

From Dec. 12, 1901, to Dec. 15, 1902, Industrial shares declined 5.74 points and rails advanced 3 points.

Intermediate rallies were as follows:

Date of Rally	Extent in Industrials Points	Extent in Rails Points	Duration Days
Feb. 20 to Mar. 21, '02	2.84	3.45	30
Apr. 10 to Apr. 24..	2.49	4.91	15
May 19 to May 24..	2.09	3.99	6
June 24 to July 28..	3.61	7.44	35
Aug. 21 to Sept. 19..	2.44	4.05	30
Sept. 29 to Oct. 3...	2.51	4.37	5
Oct. 11 to Oct. 17...	2.73	4.96	7
Nov. 14 to Nov. 21..	2.32	4.80	8

5.—The Bear Market of 1903.

This decline began Jan. 8, 1903, and culminated Nov. 9th, of the year, 10 months. The average gross decline in Industrial shares was

24.18 points, or about 36½%. The decline in Rails was 32.48 points, or about 27%.

The intermediate rallies were as follows:

Date of Rally	Extent in Industrials Points	Extent in Rails Points	Duration Days
Jan. 20 to Feb. 16,'03	3.51	1.38	28
Mar. 10 to Mar. 20..	1.85	3.11	11
Apr. 13 to Apr. 30..	3.77	5.07	9
June 10 to June 12.	2.60	4.48	3
Aug. 8 to Aug. 17..	6.50	8.14	10

6.—The Bull Market of 1904 and 1905.

The advance began Jan. 6, 1904, and culminated Jan. 22, 1906—a little over two years. The average advance in Industrial shares was 55.93 points, or about 119%. The average advance in Rails was 49.56 points, or about 55%.

The intermediate reactions were as follows:

Date of Reaction	Extent in Industrials Points	Extent in Rails Points	Duration Days
Jan. 27 to Feb. 24,'04	3.79	4.17	29
Apr. 7 to May 18...	2.55	4.03	42
Dec. 5 to Dec. 12...	7.46	5.93	8
Apr. 14, '05, to May 8, '05.....	9.23	9.81	25
May 12 to May 22..	6.68	5.50	11
Aug. 23 to Sept. 7..	4.22	4.82	16
Nov. 1 to Nov. 13...	3.31	4.74	13

The year 1906 was a neutral year. Prices for Industrials declined only slightly during the year and average prices of railroad stocks were the same in December as in January.

Money could have been made throughout the period, either by sales on rallies, or purchases on declines. As a consideration of a neutral year would add little to this exhibit, it will be omitted.

5.—What is the best general method of trading?

The writer's reply to this question consists principally of a summing up of points already covered in other portions of this work. It is necessary to study and understand the subject thoroughly, to know values, general conditions, the technical position of shares, and above all things to consult future probabilities rather than past performances. Study of the past has its educational value and this is also true of the present, but the future is the all-important thing. Retrospective speculation is one of the commonest and most flagrant of the numerous errors made by public participators. Get whatever of experience and information you can from history, but speculate on the future.

The man who enters the market with insufficient capital, who expects to get rich quick or who allows success to lead him into excesses and over-speculation will lose. It is as certain as death. He may succeed for a time but not for long.

Operations based on "tips" or "charts" will lead to final disaster. This thing of trying to

attribute habits to a market is, in the writer's opinion, ridiculous. The movements of prices are caused by events. We know that in periods of financial stringency or business depression prices fall, and in periods of inflation and good times prices rise. It is possible to formulate a system founded on repetitions applicable to every game of chance, and laid out on paper, that system will appear infallible. You can find the exponents of machine-made riches in every pool-room and gambling house in the country. They all eventually lose and there is nothing to show that the advocates of charts as a basis for stock trading ever fared any better. Imagine James R. Keene, or J. P. Morgan poring over a chart and operating thereon. Even if the market did have habits, as soon as these habits were recognized and followed by a sufficient number of people, the technical position would be rendered so rotten that the charts would fail from that influence alone. Charts, employed as a convenient method of picturing the past, may have a certain value, but used as a basis for trading they are an evidence of laziness or incapacity, or both. It requires hard work to be successful in any line. Thinking is hard work, study is hard work, research is hard work; and it is infinitely easier to bet on repetitions all nicely laid out in crooked lines on a sheet of paper than to

laboriously erect sound deductions; but the difference in the two methods is that one will succeed and the other will fail.

We may also resort to the ultimatum employed by those eminent citizens who punch each other's noses in a prize-ring, i.e., tell the chart-players to "go and get a reputation." When they can show even one instance of a fortune accumulated by this method their cause will be greatly strengthened.

In the exception taken to Mr. Dow's theory of $2,500 being the minimum amount necessary for operations in small lots, nothing could be further from the present writer's intentions than to recommend transactions on insufficient margin. What is sought is merely the truth. The contention that it is wise to stimulate extreme conservatism will not hold. If the naming of a certain sum far in excess of real needs is praiseworthy, we may expand the matter indefinitely and name $5,000 or even $10,000, as the limit.

But on the other hand, errors on the side of prudence are vastly preferable to errors on the side of rashness. In this as in all other things, the golden mean is the really desirable factor.

As to the best side of the market for operations, it is thought that the long side offers the greatest opportunities. The long side is healthier, it is constructive, and almost all the

great fortunes made in the market have been founded on discreet and well-timed purchases. To adhere to this plan, however, frequently requires long periods of non-participation, and speculators are not, as a class, very patient. The man who can so school himself as to await opportunities to purchase good securities at low prices has by far the best of the bargain. Few men can do it.

It is fully realized that a work which defends stock speculation in any degree, will meet with much criticism. Nevertheless, people will speculate and if you are one of those who will —do it right.

It is submitted in concluding this work that if the advice here given is heeded, i. e., to know what you are buying and why; to buy only good properties when prices are depressed; to exercise patience and provide sufficient capital; to eliminate first and forever the idea that correct deductions mean sudden riches; to use brains instead of charts, and common-sense instead of tips; in short, to apply to speculative ventures the same degree of business foresight and understanding as would be employed in any other business, the evils and losses which have always been a part of speculative history, would be diminished if not eliminated.

BIBLIOGRAPHY.

The books named on the following pages have been chosen as the nucleus of a reference library particularly adapted to the needs of the speculator. These works have been selected because of their clearness, soundness and simplicity. There are many other excellent works bearing directly or indirectly on the subject but these latter will be suggested as the student progresses and it has been thought best not to name a large number of books, which might result in confusion as to the character of the subject matter. The possessor of the works named will find that he has a very compact, comprehensive and inexpensive little library, both from an informative and statistical standpoint.

A B C Series. (The Wall Street Library.)

This collection of six small volumes will be found useful to the student. The subjects are arranged as follows:

Vol. 1—A B C of Wall Street. By S. A. Nelson.

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